KIMO
INSTRUMENTS®

User Manual

LSL 200

Download and data processing software

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I – Introduction

Provided with the solarimeter, **LSL200** is a configuration, recovery dataprocessing software.
Easy handling, it requires a small learnig and allows an immediate dataprocessing.

Main functions :
• Set up time of **SL200** solarimeter**.**
• Data recovery and creation of text file.
• Display the progress of daily irradiance during a dataset up to 31 days.
• Zoom function for more precise study of a period or a day
• Reading of values of the illumination and exposure energy
• Dataprogress can be shown as image, in different format, for insertion into files or direct printing.

II – Software installation

1. Please take necessary rights. Otherwise, contact the administrator.
2. Insert the CD-ROM. The installation program starts automatically.
   Note : If setup does not start automatically, go to desktop or Windows Explorer and double-click on LSL200.
3. Follow the instructions on the screen.
   Note: Depending on softwares installed on the computer (in particular NET Framework), the waiting time can be significant – Wait. For a few moment.
4. Restart computer.
It is strongly recommended that you restart the computer after installation. Remember to save and close all other programs in use before clicking Finish.
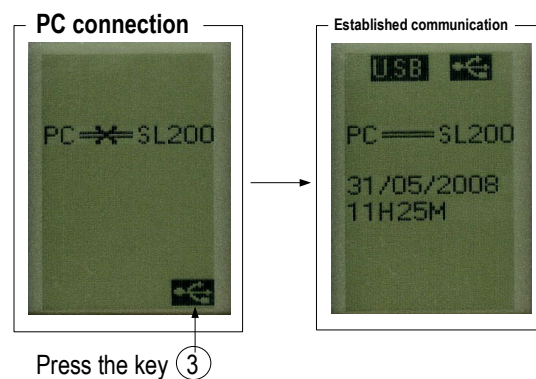**5.** Software is now installed, LSL200 icon is displayed on the desktop.

III – Driver installation

1. Connect the instrument to the computer through the provided USB cable.
2. Press **INST** key then **"Screen"** key to obtain **PC –SL200** screen.
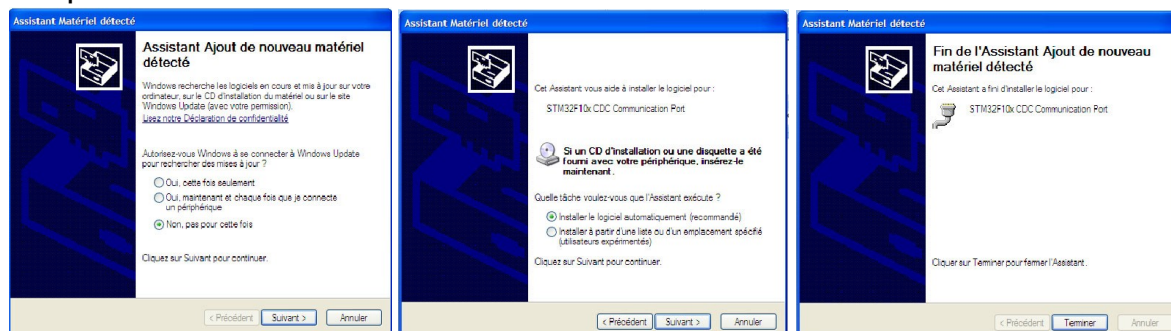**3.** Press USB pictogram key. ⟨⚡⟩

Computer detects **SL200** instrument and proposes to install USB driver
from **« Hardware Wizard »** of Windows.

3. Follow instructions, click on "**Follow**" then on "**Finish**" to validate installation

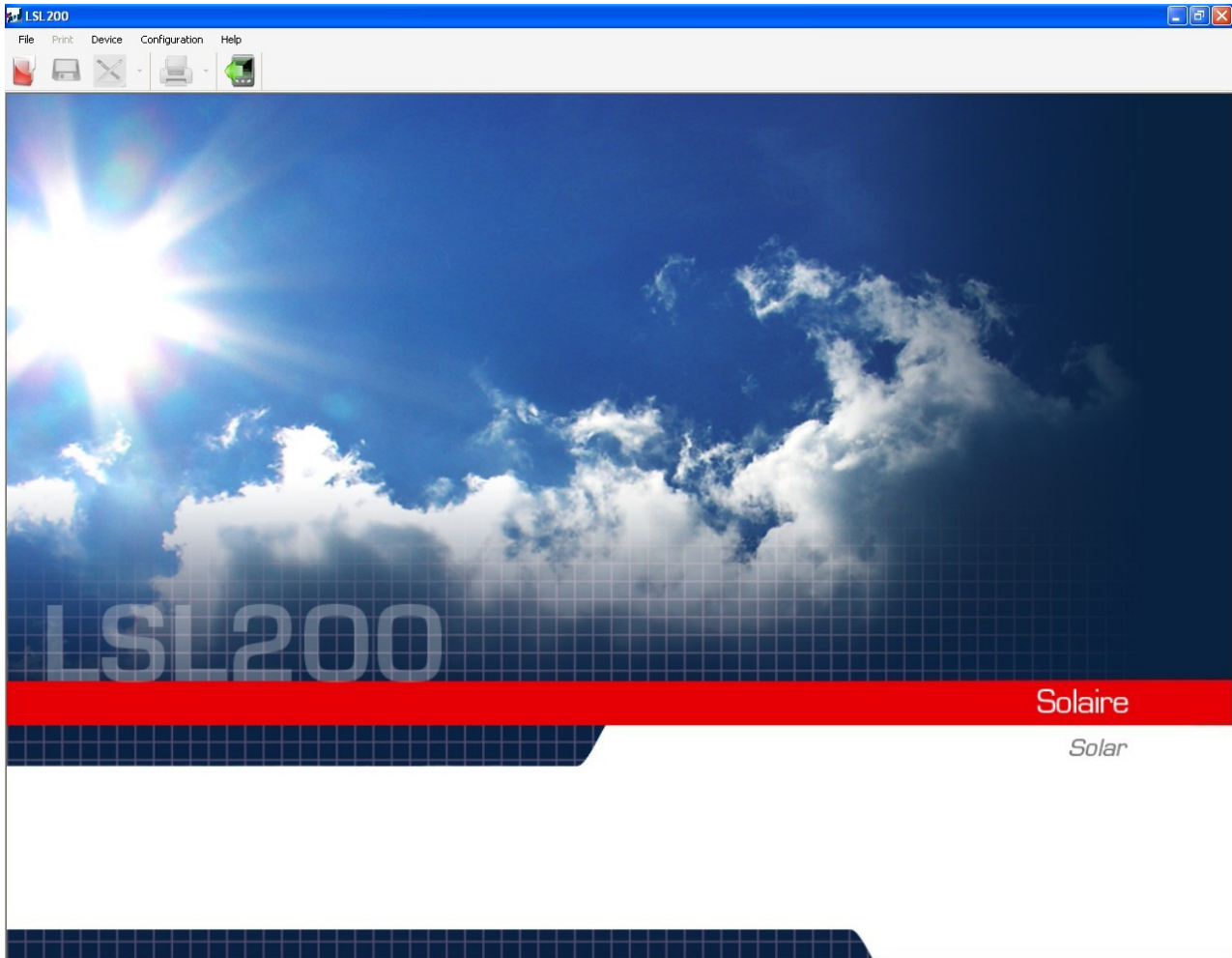Follow usual instructions on the screen to install a driver.

PC connection

PC ⫘ SL200

Press the key ③

Established communication

USB ⚡

PC ═ SL200
31/05/2008
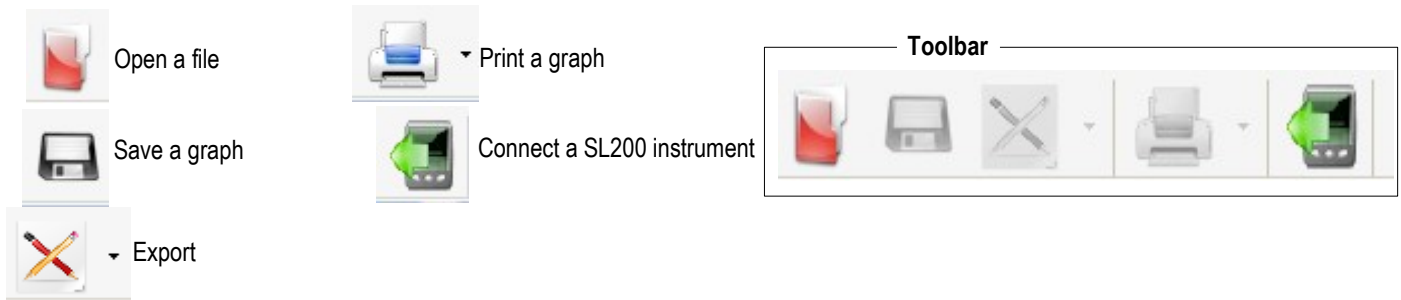11H25M

Examples: Hardware Wizard

DL200 can now convey with SL200 instrument and receive files of measurment. See
 « Established communication » figure.

IV – Software presentation

Open the software by double clicking on **LSL200** icon.
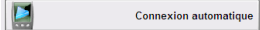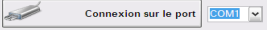The **LSL200** home window is open with its toolbar :

Homepage

 Open a file

 Save a graph

 Export

 ▾ Print a graph

 Connect a SL200 instrument

Toolbar

Only the **Open File** button and **Connect a device** are active when you open the software.

1. Connect the instrument to USB cable connected to the PC and click on icon
to launch a search for identification.

2. Connection window appears. See "**Connection**" screen.

3. Perform the automatic connection clicking on [Connexion automatique]
If that fails, select a port (eg COM1) in the drop-down list of the "Connection on port", and
then click on [Connexion sur le port COM1]

If this fails, repeat the process by choosing a different port (or for advanced users search in
Windows port occupied by SL200 instrument: Path : System – System Properties - Hardware
- Device Manager - ports) until obtaining the connection.

4. When the connection is done, the operator can :

- Set time of SL200 solarimeter clicking on the **«pendulum»** icon. Wait for a while
and then see the correction on the device.
*Note : date - time information, indicated in the « Instrument Time » zone do not
change, it simply indicates that modification happened at this moment.*
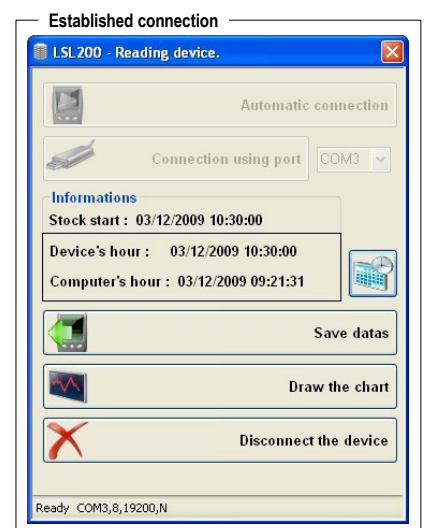
- Transfer data in **SL200** instrument by clicking on **« Save data »** tab.
The saving window opens and the operator chooses on its hard disk, the directory
path and file name in text format.
Eg : DL200-8062008.txt)
Once transfer is completed, a message informs the success of the operation.
Validate by clicking on **OK.**

- Display graph.

5. Once registration is completed, the operator can :

- Display graph. Directly visualize the graph of the file by clicking on the
"View graph" zone

- Disconnect the instrument.

Connection

LSL 200 - Reading device.

Automatic connection

Connection using port   COM1

Save datas

Draw the chart

Disconnect the device

Ready COM1,8,19200,N

Established connection

LSL 200 - Reading device.

Automatic connection

Connection using port   COM3

Informations
Stock start : 03/12/2009 10:30:00

Device's hour :   03/12/2009 10:30:00

Computer's hour : 03/12/2009 09:21:31

Save datas

Draw the chart

Disconnect the device

Ready COM3,8,19200,N

VI – Software functions

VI 1 – Graphic display function

Graphic and value grid buttons

Toolbar

Global view

Statistics

File browser

Values grid

Graphic

• Meaning and function of graphic and grid values windows buttons **:**

This button will display the graph and grid values.

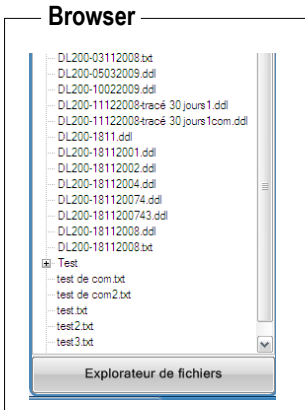This button will only display the graph.

This button will display only the grid values.

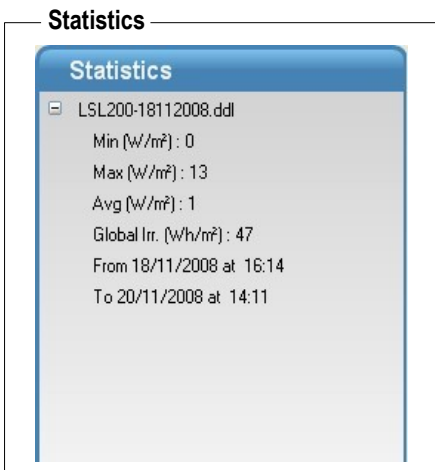• Meaning and function of **« Dataset information » button**

By clicking on this button, the operator has an access to instrument serial number, dates of beginning and end of dataset and statistics of the measurement dataset. File name and location of the report are shown.

• File browser

Browser

File browser is a representation of the folder **« Report »** of installation directory of the software.
Double click on a file to open it.

• Available informations

Statistics

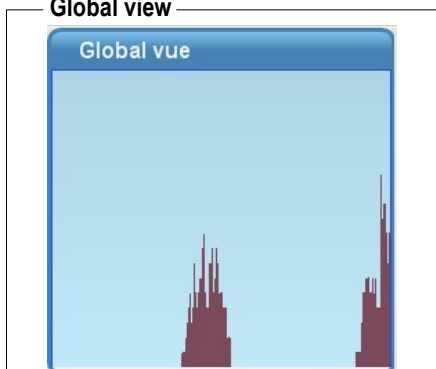Statistics display general information about the entire dataset :
- minimum value recorded
- maximum value recorded
- average
- overall irradiance
- start and end of dataset

Statistics over a given period

These statistics are relating to a given period in the measurement dataset.
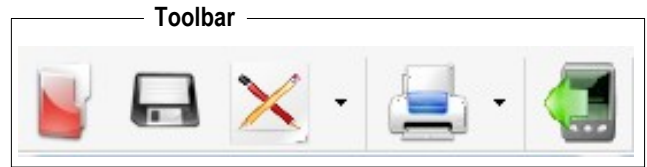So they are only displayed during a zoom.

Global view

The global view allows to always have a vision of the entire dataset.
The blue area indicates the period shown.

Grid values

The grid values indicates date, time and value for a noted point.
It is possible to add a comment by double clicking on the corresponding line. Then the comment appears on the graph.

• Meaning of toolbar button :

Opens a report recorded on the computer

If report is recorded for the first time, please enter name, recording format, and location.
Recording will automatic for an existing record.

Click on the drawing to export the record as an image.
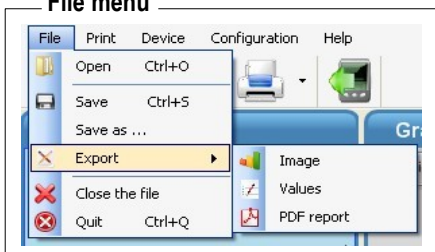Click on the arrow to choose another export format.

Click on the picture to print an image of the report.
Click on the arrow to choose other document to print.

Open the downloading window of the instrument.
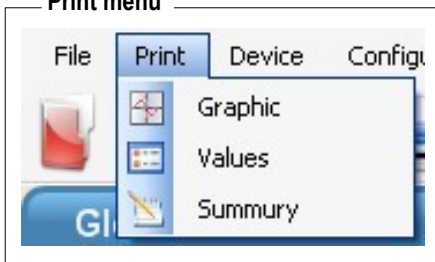
• Meaning and function of menu bar

Menu bar

| File | Print | Device | Configuration | Help |

File menu

- **Open :** allows to choose a report saved on the computer, in ddl and/or .txt format
- **Save / Save as... :** allows to save open file.
- **Export :** allows to save the report in operation in various formats.
- **Close the file :** closes the current report.
- **Exit :** exit software.

Print menu

- **Graphic :** prints only the graph displayed by the software.
- **Values :** only prints the values of the current graphic.
- **Summary :** prints a summary, on one page, of the campaign of measurement displayed.

Device menu

- **Device reading :** displays the login / unloading window of SL200 instrument.

Configuration menu

- **Display :** allows to change the logo and set the colors for the application
- **Settings :** allows to change the graphic scale.
- **Languages :** allows to change software language.

VI 2 – Graphic handling

Show all data :

Direct use by clicking on "Display Chart" as described above when transferring data (see p4)
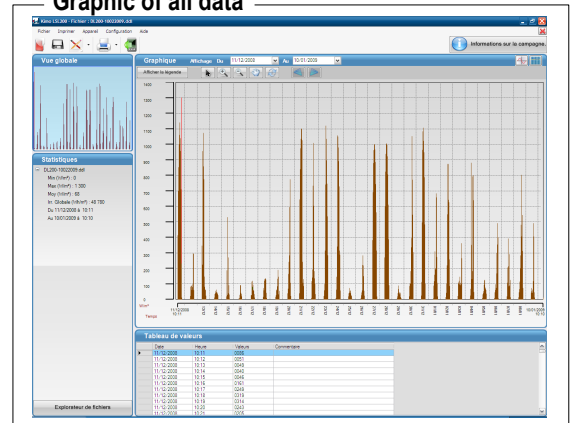or by opening a .txt or .dll file already saved in a suitable directory.

Click on directory icon in the **LSL200** instrument banner, then choose in the window the required directory and file then click on **"Open"**.

Red and black markers on graphic tag suspicious events : **overload and fault sensor** *(not in this example)*.

<u>Precision</u> : graphic can visualize up to 31 measurement days.
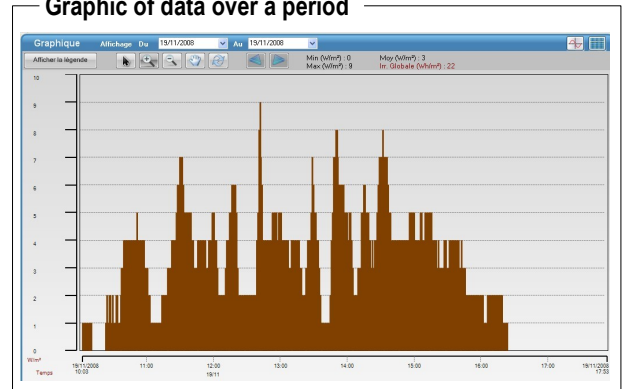
Graphic of all data

Show data over a period (zoom function) :

Zoom function allows to choose the period you want to display :
- Select a date of beginning for the period in **"Display from"**.
- Select a date of end of period in **"to."**

Graphic of data over a period

The software allows to display very specific areas of graphic.
For that, use zoom tool marked with a **"+"** sign :
 - Click where you want the beginning of the zoom and keep clicking.
 - Move the mouse until the end of the zoomed period.
 - Release mouse button.

To go back to previous view, use zoom tool marked **"-"** sign.

• A single click on the icon [icon] cancels the choices made and resets the original graphic.

• The hand tool can move laterally on the graph.

• When the selected period is one day, arrows [arrows] they become active and you can skip to the previous or next day.

• The arrow tool allows you to click on a point on the graphic and displays the time and the maximum value of the point.
  If graphic display is in graphic / values grid mode, the line corresponding to the point will be highlighted and will appear as 1st line of the values grid.

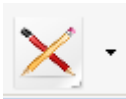Right click on the graphic to display the following menu:

This menu allows :
- to add a comment on the indicated value
- to change tool
- to set coordinates axis

> **NOTE** Double-click on the graph to display the configuration window of logo and colors.
> Double-click on a line of the values grid to display the **"add a comment window"**.
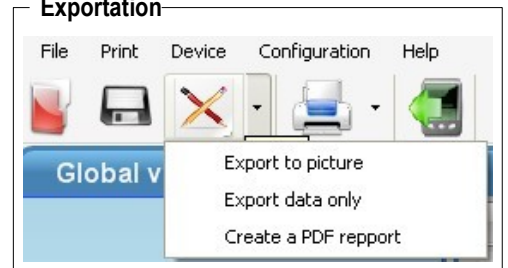
VI 3 – Data exporting

Displayed graphic and grid value can be exported as :

- Image file format. Avalaible formats are **jpeg, bmp, png, gif.**
- .txt format for the grid value, easily readable by a spreadsheet.
- **.pdf** file.

Exportation

> **NOTE** It is possible to add a comment before exportation as image file and export in .pdf format.

Comment

VI 4 – Print

 The software can print the graphic, the value grid or a summary of the dataset.

- To print the graphic :

- Click on the Print button and choose the required printing (here, graphics). *The window of print option opens.*
- Tick the button **"With value comments"** *if comments have been added and should be printed.*
- Tick the button **"Without value comments"**, if there is no comments *or if they are not to be printed.*
- Add a general comment (this is not compulsory).
- Click on **"Confirm"**.
- Select printer.
- Click on **"OK"**.
The **"*Print preview*"** *window opens.*
- Click on **"Print"** button on the top left of the window or click on **"Close"** button to cancel.
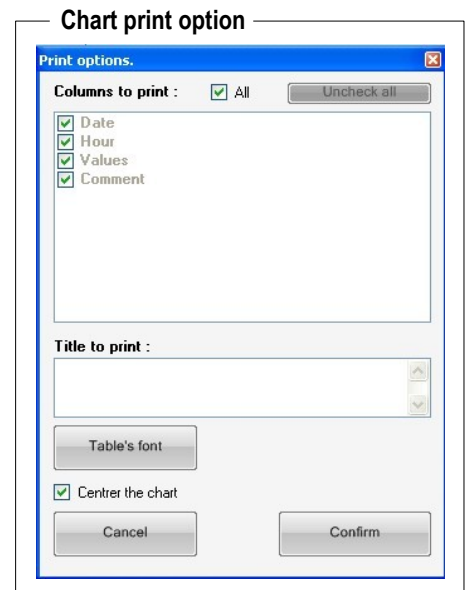
Print options

• Print values grid :

- Click on the Print button and choose the required printing (here, values). *The window of print option opens.*
- Select columns to print by ticking or unticking corresponding boxes.
- Add a title to the chart grid (it's not compulsory).
- Modify the grid font (type, size, color...).
- Tick the box **"Center the chart"** to put the chart in the middle of the page.
- Click on **"Confirm"**.
- Select printer.
- Click on **"OK"**.
*The "**Print preview**" window opens.*
- Click on **"Print"** button on the top left of the window or click on **"Close"** button to cancel.

Chart print option

• Print the summary of the dataset :

- Click on the Print button and choose the required printing (here, summary). *The window of print option opens.*
- Add a general comment (this is not compulsory).
- Click on **"Confirm".**
- Select printer.
- Click on **"OK"**.
*The "**Print preview**" window opens.*
- Click on **"Print"** button on the top left of the window or click on **"Close"** button to cancel.
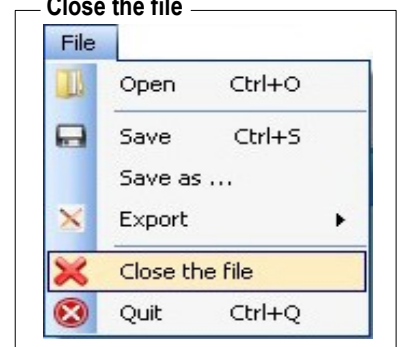
VI 5 – File shutdown

To close the file :
- Click on **File**.
- Click on **Close the file**.

> NOTE
> When the file is closed, the application returns to the homepage of the software.

Close the file

VI 6 – Exit software

To exit software :
- Click on **File**.
- Click on **Quit**.

Exit software

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AFAQ
ISO 9001
VERSION 2000