WEBVIEW-L

Energy server embedded in the DATALOG H80/81

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1. Documentation

All documentation on the WEBVIEW range is available on the SOCOMEC website	

2. Preliminary operations

It is highly recommended to become thoroughly acquainted with the contents of this manual before configuring and using WEBVIEW-L

Below is a list of compatible browsers:

- Chrome v30 and higher (recommended)
- Internet Explorer v9 and higher
- Firefox v24 and higher

We recommend using a 1920 x 1080 pixel screen for optimum legibility of the display of the different content.

Using a different screen format may cause changes in how certain areas are displayed.

To enable access to the different WEBVIEW-L functions, the following protocols and ports must be enabled on the network:

- HTTP port 80 for access to WEBVIEW and file transfer (Datalogger function)
- HTTPS port 443 downstream of H80/H81 for secure file transfer (Datalogger function)
- FTP port 21 downstream of H80/H81 for file transfer (Datalogger function)
- FTPS port 990 downstream of H80/H81 for secure file transfer (Datalogger function)

3. Introduction

3.1. Overview of WEBVIEW

WEBVIEW delivers real-time monitoring of electrical installations and tracking of energy consumption levels, integrated in the DIRIS A-40 central measurement system, DIRIS D70, DIRIS G communication gateways and the DATALOG H80/81 datalogger.
It is intended for use by facility managers who wish to have a capable tool for analysing malfunctions in their installations rapidly, and to guarantee energy-related performance.

WEBVIEW can collect data from the DIRIS Digiware range of devices, DIRIS A and B central measurement systems, COUNTIS energy meters and the ATyS p M transfer switches, but also from any device communicating with the Modbus protocol.
The user can access WEBVIEW via a web browser on a PC or a tablet.

3.2. Versions

There are different versions of the WEBVIEW software:

WEBVIEW versions	Hosting	Functions
WEBVIEW-S	DIRIS A-40 Ethernet	Monitoring Alarms and events Consumption Trends
WEBVIEW-M	DIRIS G	Monitoring Alarms and events Consumption (DIRIS G50/60) History (DIRIS G50/60)
	DIRIS D-70	Monitoring Alarms and events Photoview Consumption Trends
WEBVIEW-L	DATALOG H80/H81	Monitoring Alarms and events Photoview Consumption Trends

WEBVIEW-L is available in two versions:

- WEBVIEW-L100 : up to 100 devices
- WEBVIEW-L200 : up to 200 devices

This user manual describes the functions and configuration services of the WEBVIEW-L version hosted in DATALOG H80/H81.

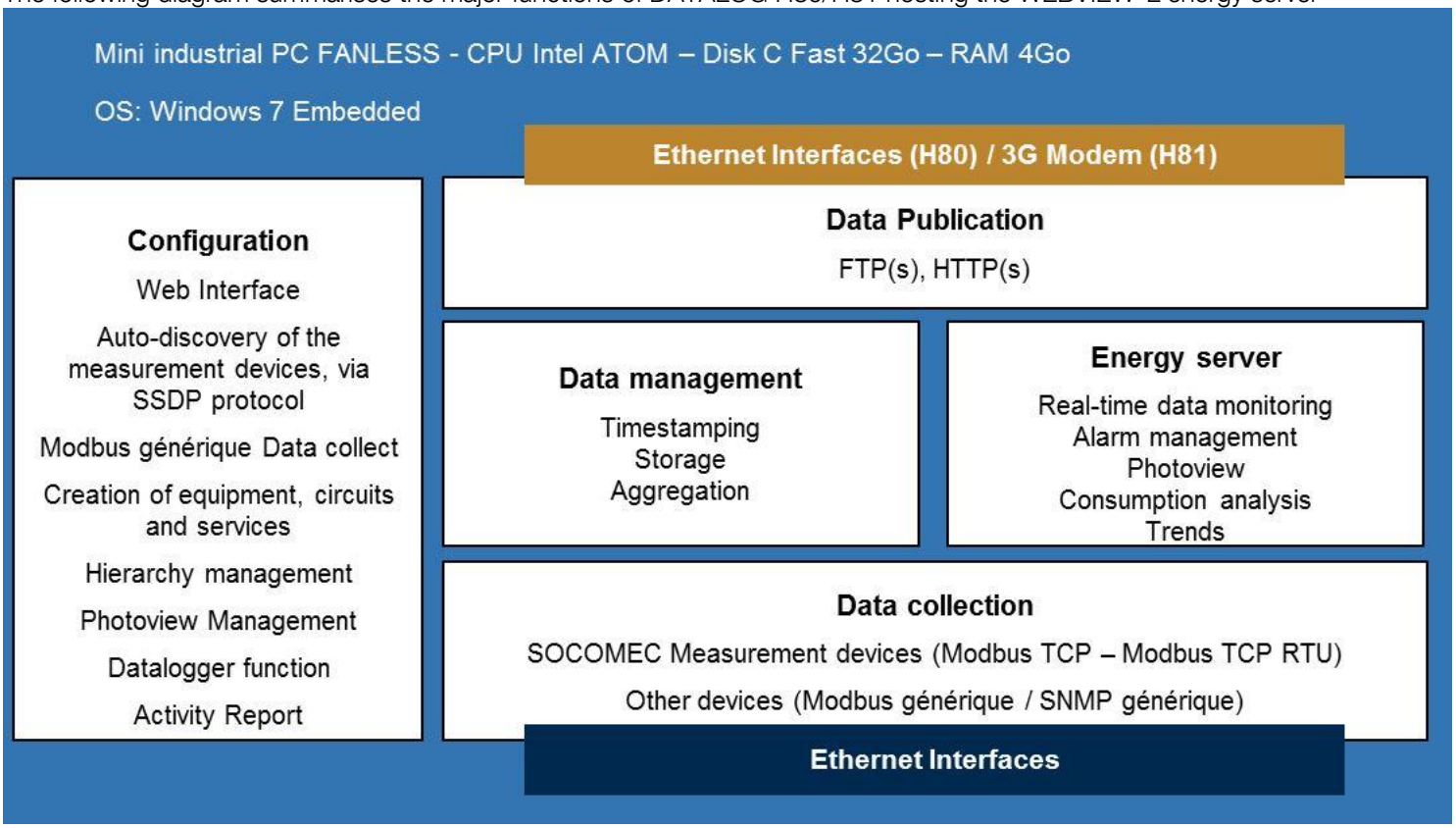
3.3. Overview of the DATALOG H80/H81 hardware

WEBVIEW-L is hosted in DATALOG H80/H81, a SOCOMEC datalogger.

DATALOG H80/H81, installed at the core of the energy ecosystem, allows you to:

- Automatically collect data from meters and multi-fluid pulse concentrators;
- Timestamp, secure, store and incorporate energy data;
- Analyse and utilise data
- Publish data to a system or an external application.

The following diagram summarises the major functions of DATALOG H80/H81 hosting the WEBVIEW-L energy server



DATALOG H80/H81 is available in 2 versions:

- **DATALOG H80:** 2 LAN Ethernet ports
- **DATALOG H81:** 2 LAN Ethernet ports + 1 wireless 3G port (for publishing data)

3.3.1. Detailed description of the H80:

Mini Fanless Industrial PC, Intel Atom CPU with dual core N2807 1.58 GHz processor, CFAST slot, 1 x RS232, 1 x USB3.0, 2 x USB2.0, HDMI output, 2 x GbeLAN, Vin +12 VSC (lockable plug). Supplied with AC/DC adaptor for Europe.
Includes:
- 4GB DDR3L RAM
- FLASH CARD CFAST 32GB MLC Top type -40° to 85°C
- LICENCE and OS MICROSOFT WES7 installed
- RAILDIN 9741640401 support
The DATALOG H80 is guaranteed for 1 year.

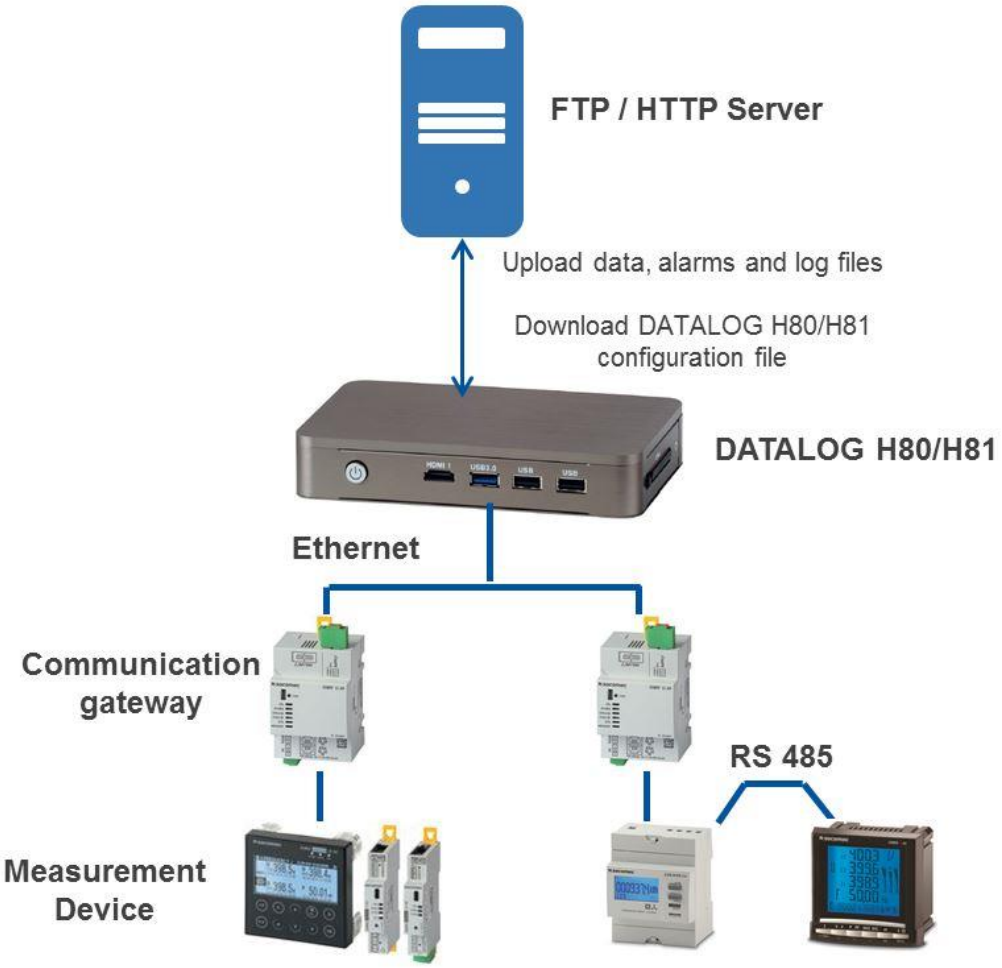
3.3.2. Detailed description of the H81:

Mini Fanless Industrial PC, Intel Atom CPU with dual core N2807 1.58 GHz processor, CFAST slot, 1 x RS232, 1 x USB3.0, 2 x USB2.0, HDMI output, 2 x GbeLAN, Vin +12 VSC (lockable plug). Supplied with AC/DC adaptor for Europe.
Includes:
- 4GB DDR3L RAM
- FLASH CARD CFAST 32GB MLC Top type -40° to 85°C
- LICENCE and OS MICROSOFT WES7 installed
- RAILDIN 9741640401 support - 3G modem with antenna
The DATALOG H81 is guaranteed for 1 year.

3.4. Communication architecture

The DATALOG H80/H81 is interconnected with FTP/HTTP servers for the publication of stored data and the backup of alarm and log files, as well as a configuration backup

The diagram below shows the standard communication architecture:



3.5. Data file

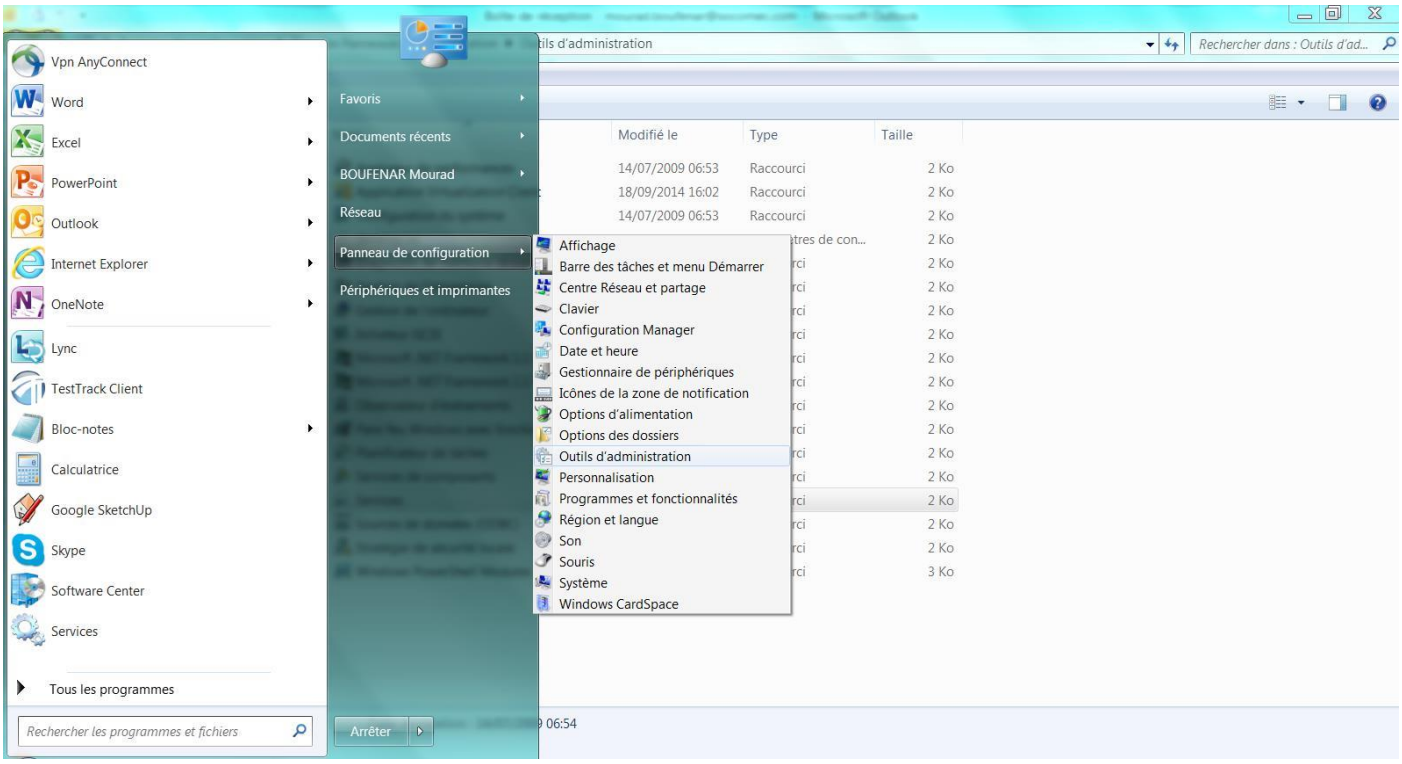
An example of the file of data published to the remote server is available in Appendix 1 of this document.

3.6. Configuration of 3G communication of DATALOG H81

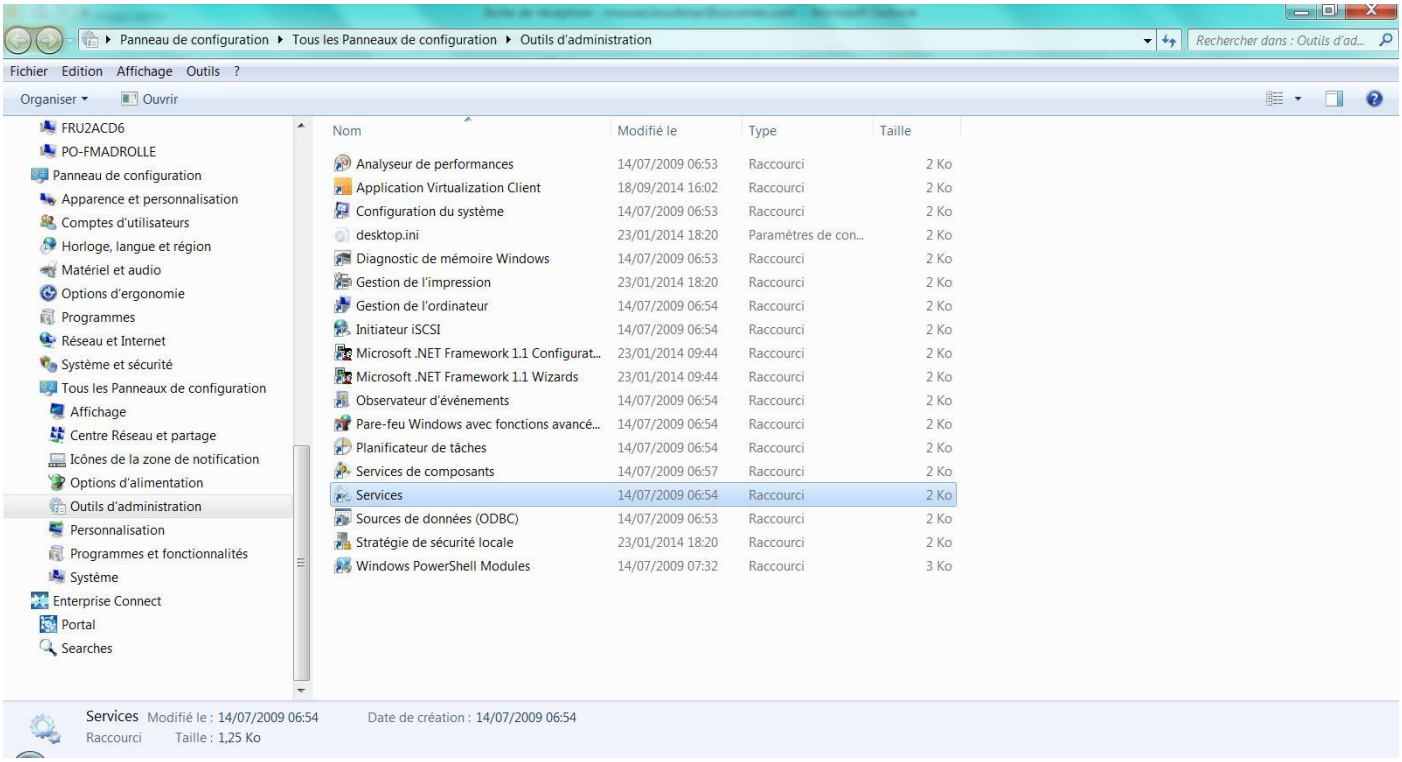
If a 3G connection is used, the user will need to configure the Windows services of DATALOG H81 so that the connection can be activated automatically.

To access the configuration menu for Windows services, the user:

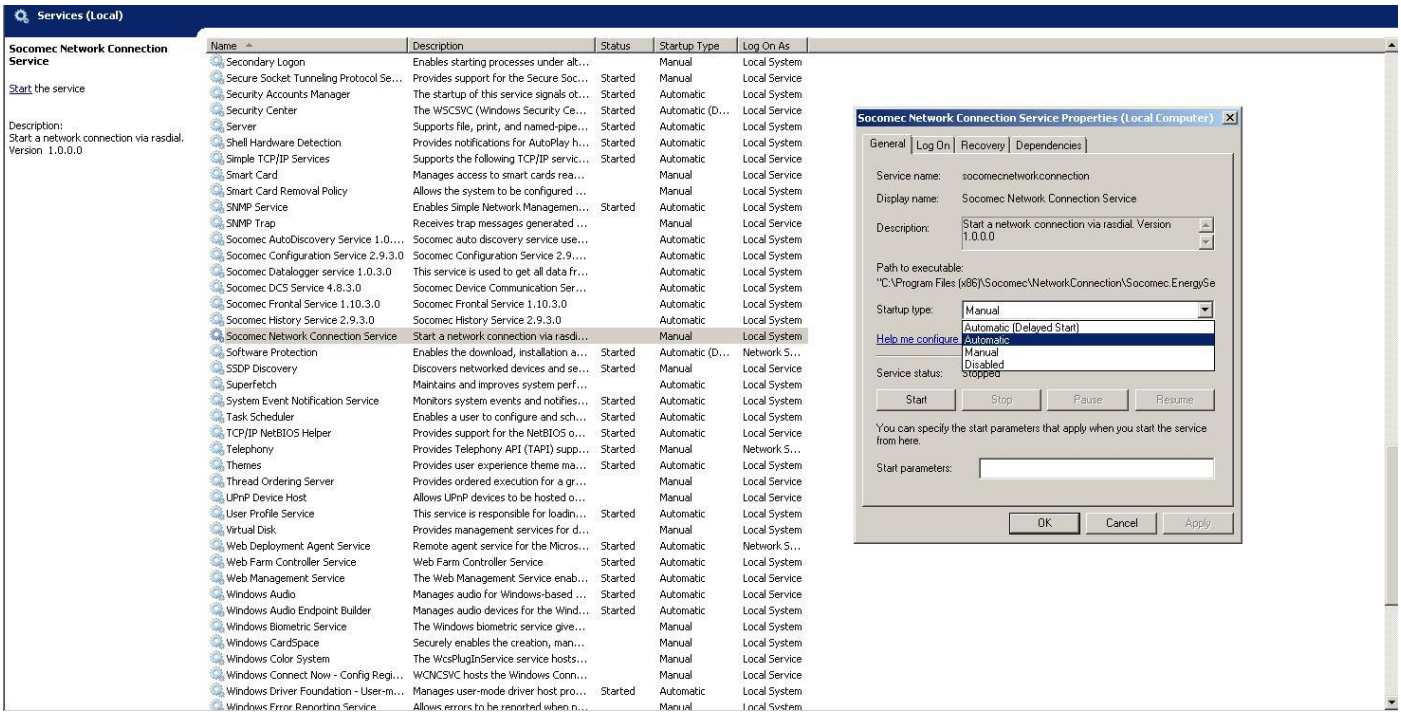
1. opens the "Administration tools" tab in the DATALOG H81 control panel.



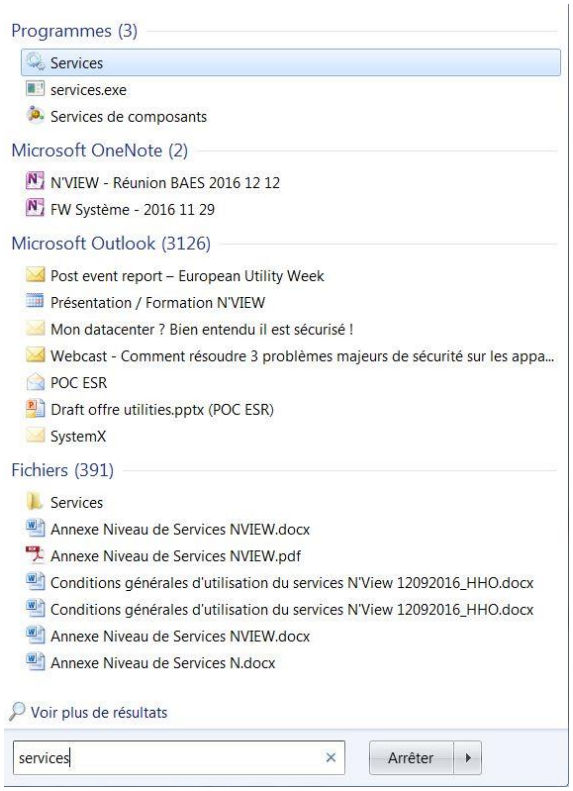
2. accesses Windows services via the "Services" shortcut



3. opens the "Socomec Network Connexion Services" service and positions the "Startup type" in the "General" menu on "Automatic"



To access the DATALOG H81 Windows services, the user can also enter "Services" in the search field of the Windows "Start" menu.



4. User profiles

There are three types of profile:

- 'User' (default)
- 'Advanced User'
- 'Admin'

Access to the 'User' profile is automatic and does not require a password.

Select 'Advanced User' or 'Admin' profiles to configure settings.

	Monitoring	Analysis	Partial energy reset	Declaring/ Devices and Hierarchies	Diagnostics	Change passwords	Default password
User	•	•			•		no password
Advanced User	•	•	•		•	Advanced User's password only	UserAdvanced
Admin	•	•	•	•	•	Administrator's password only	Admin

Please note: Passwords are case-sensitive.

5. STARTUP

Like all Web applications, the WEBVIEW-L software needs an Ethernet network connection.
Simply enter the URL of the device in the browser to access WEBVIEW-L.

5.1. Access to the application

To access the application, the user is required to log on from the WEBVIEW-L homepage:

- Profiles: User, Advanced User or Admin
- Password: For the Advanced User and Admin profile
- Language: select from the list of available languages

After logging on, the user is taken to the WEBVIEW-L function page. Here they can either access one of the available functions or configure WEBVIEW-L, if they have the appropriate authorisation.

6. USER-FRIENDLY DESIGN

6.1. Perimeter

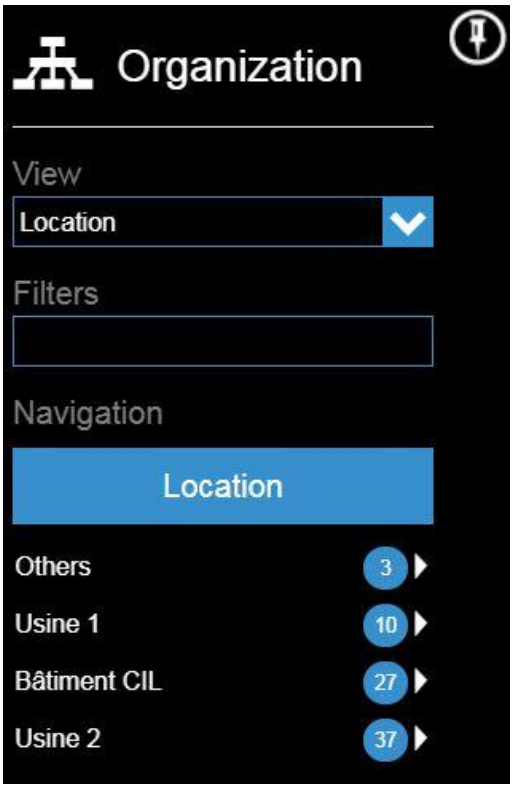
The 'perimeter' to the left of certain WEBVIEW-L function pages allows you to browse the data

Opening the perimeter

Closing the perimeter

Option of 'pinning' the perimeter

6.2. Organisation Section



The Organization section of the perimeter is divided into different parts:

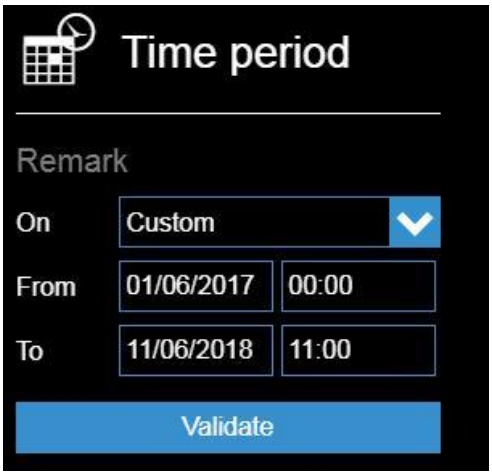
View: Drop-down list for selecting a customised browsing mode according to function:

Function	Browsing mode
Monitoring	Location, Usage, Fluid, Photoview
Alarms and events	No perimeter
Photoview	No perimeter
Consumption	Hierarchy, Use, Fluid
Trends	Location, Use, Fluid

Filters: Option of filtering by name (e.g. I35 - Filters all I35 devices or option of filtering by the name of a location).

Navigation: Displays the result of choice of View and Filters selector and allows you to browse the network directory structure. The number of associated loads or circuits is indicated next to the name of the directory structure level (e.g.: CIL building - 27 loads)

6.3. Time period



The Time period section of the perimeter allows you to select either a predefined analysis period (Current year, Current month etc.) or customised analysis period between two dates.

6.4. Favorites

Only available in the Trends function, the Favourites section can display regularly viewed measurement trends. (e.g. the electrical parameters of a process or a consumption trend correlated with one or more influence factors) .

6.5. A range of elements to optimise page views

The user can click on this symbol to hide or display the menu banner at the top of the page

In the Trends function, the user can hide or display the configuration of trends when viewing measurement trends,

7. Using functions

7.1. Home Page

The homepage shows the following functions:

1. Return to homepage
2. Access WEBVIEW-L configuration functions

The Monitor section: Monitors the real-time data measured by the devices.
3. Monitor: Shows the measurement and analysis functions of the electricity network
4. Alarms and Events: Shows the list of SOCOMEC device alarms
5. Photoview: Shows measurements on an image (building plan, electrical diagram, plan etc.)

The Analysis section: Analysis of data stored in DATALOG H80/H81
6. Consumption: Shows the consumption data
7. Trends: Shows the measurement trends

8. Shortcut to the alarm data
9. Log off

Important: The data stored in WEBVIEW-L are conditioned by the technical specifications of devices and data collected.
The screens adapt automatically according to the devices and their configuration.
Example 1: An alarm is not shown if it has not been pre-configured with Easy Config.
Example 2: The Quality view is hidden if the device measuring the load does not have the THD function; the same applies to the Input/Output view which is hidden if the device does not have Inputs/Outputs.
Example 3: The Monitor views of ATyS-p-M are customised according to device characteristics.

7.2. Monitor

The data that can be viewed under Monitor allow the analysis of the network (Summary/Quality) and the analysis of the load (Quality/U/I/Power/Energy/Input/Output/Summary).

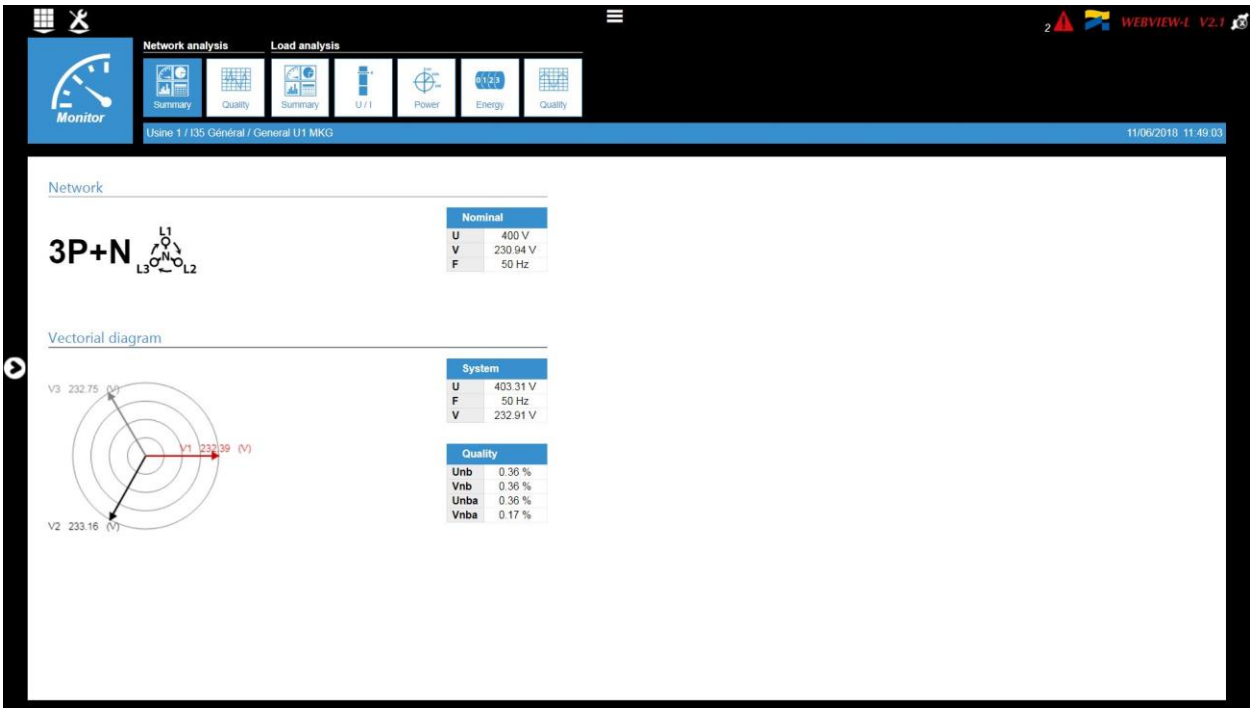
These are real time values collected directly from the devices.

The device to be Monitored must be preselected via the perimeter to view the data.

7.2.1. Monitoring SOCOMEC measurement devices

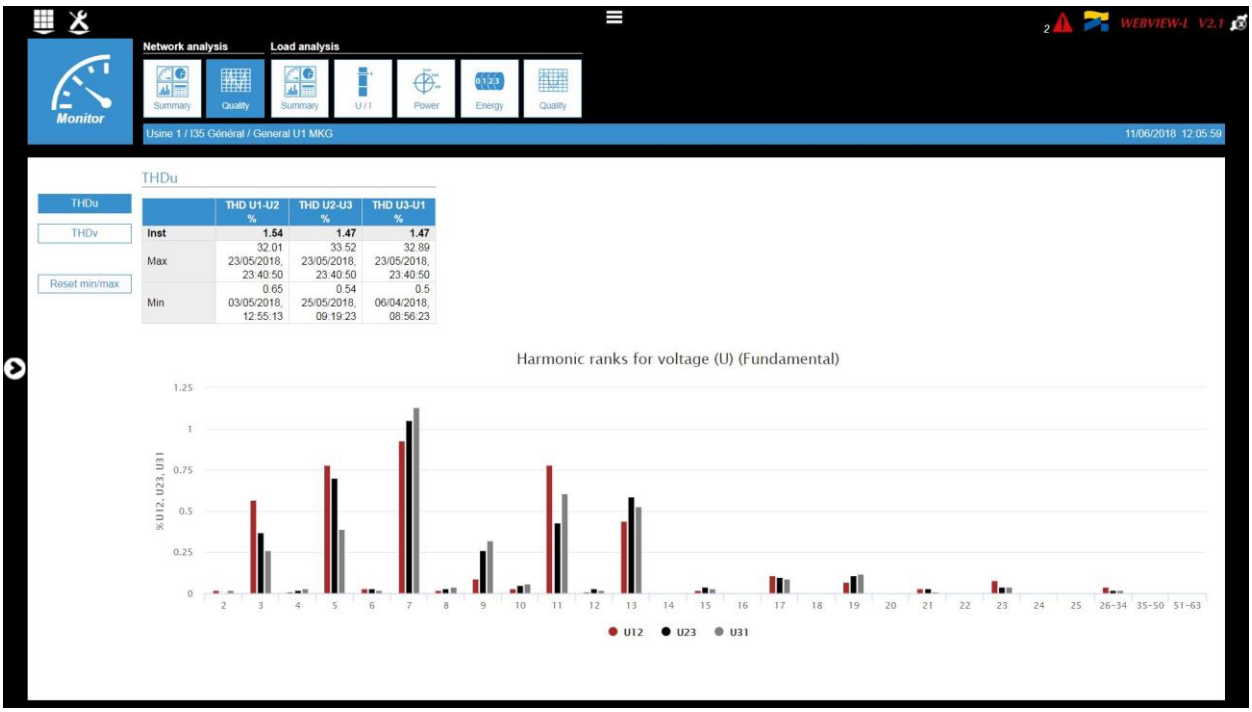
- Network Analysis page - Summary

This page shows the type (3P+N) and Vectorial diagram of the network.



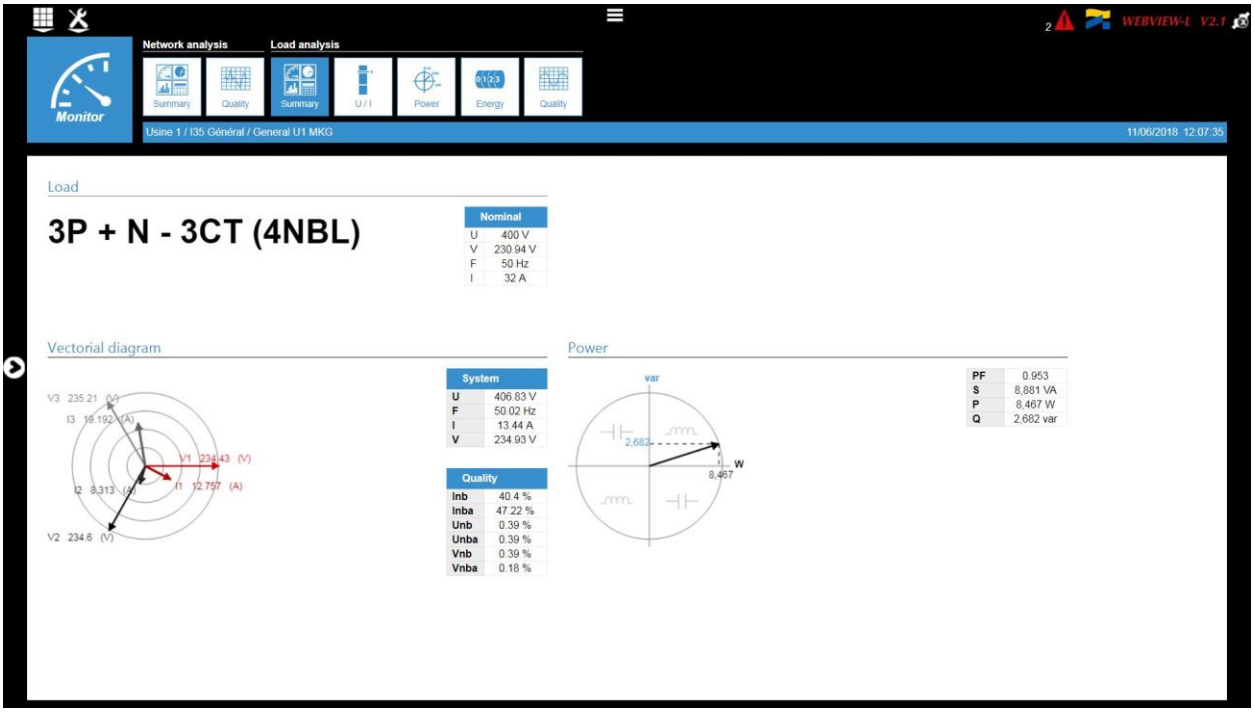
- Network Analysis page - Quality monitoring

This page shows the total harmonic distortion (THDu and THDv) and harmonic orders U (up to order 63) of the network.



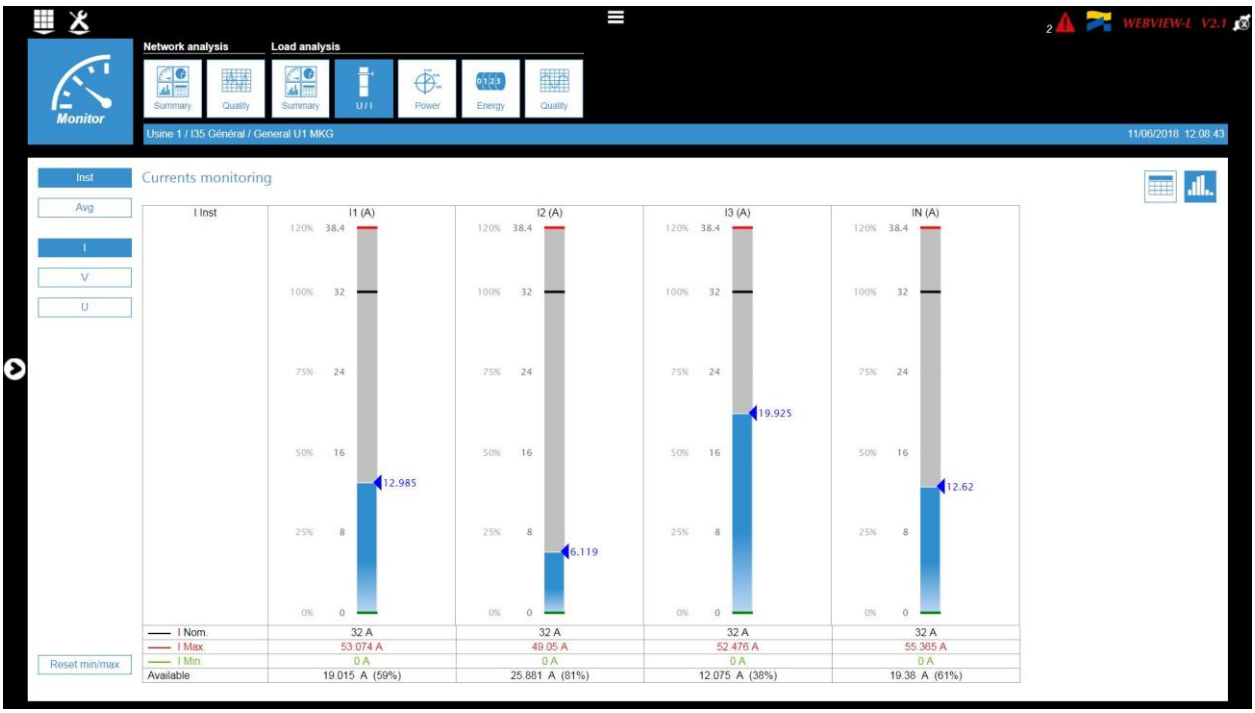
- Load Analysis page - Summary

This page shows the type of load, the Vectorial diagram and the four-quadrant power presentation.



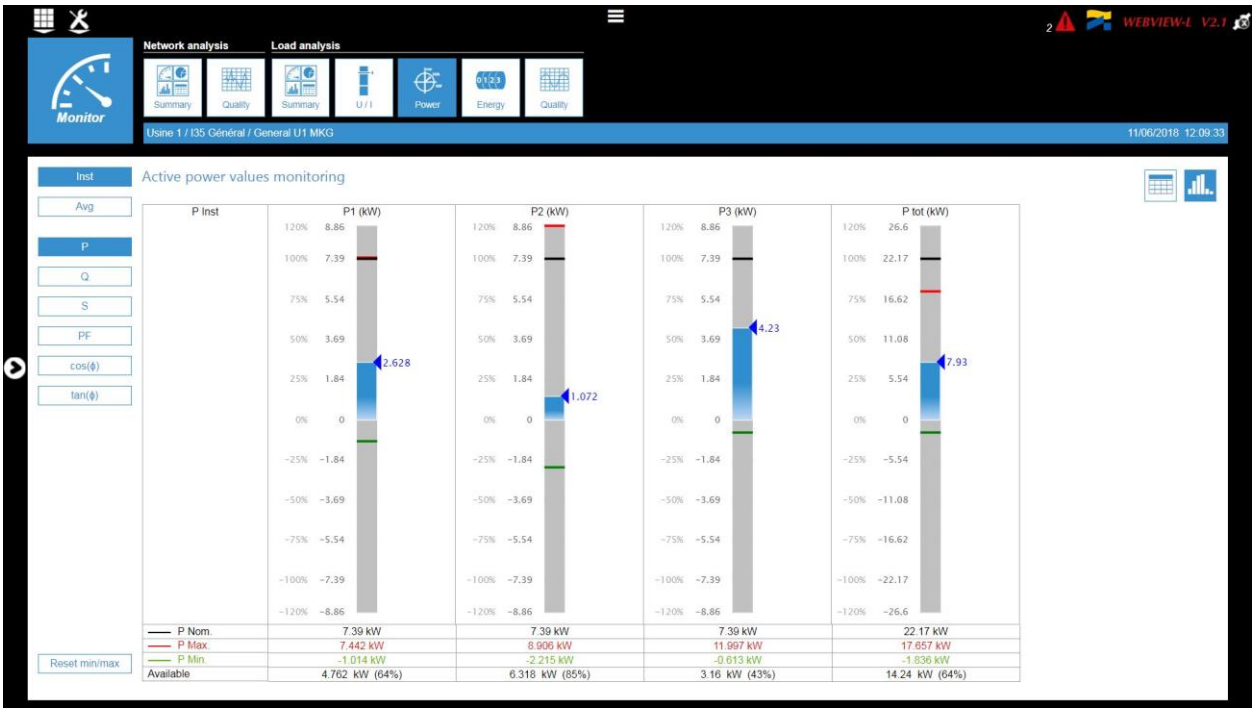
- Load Analysis Page - Current and voltage monitoring

This page shows snapshot data and mean currents and voltages on gauges. The data are also available in table form.



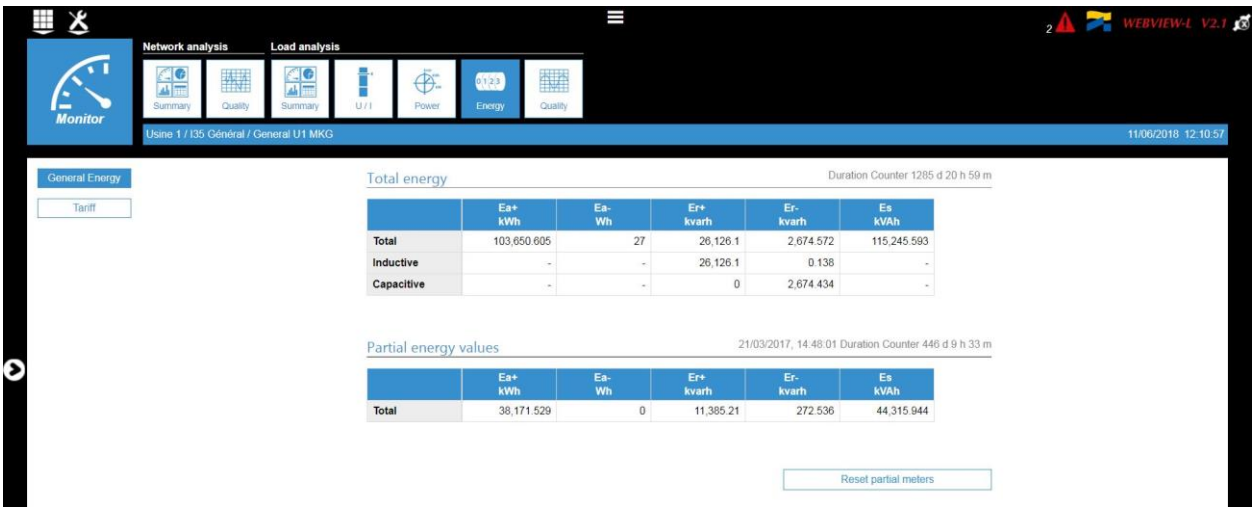
- Load Analysis Page - Power monitoring

This page shows the snapshot and mean power data (P, Q, S) on gauges, including cos (phi) and tan (phi) values. The data are also available in table form.



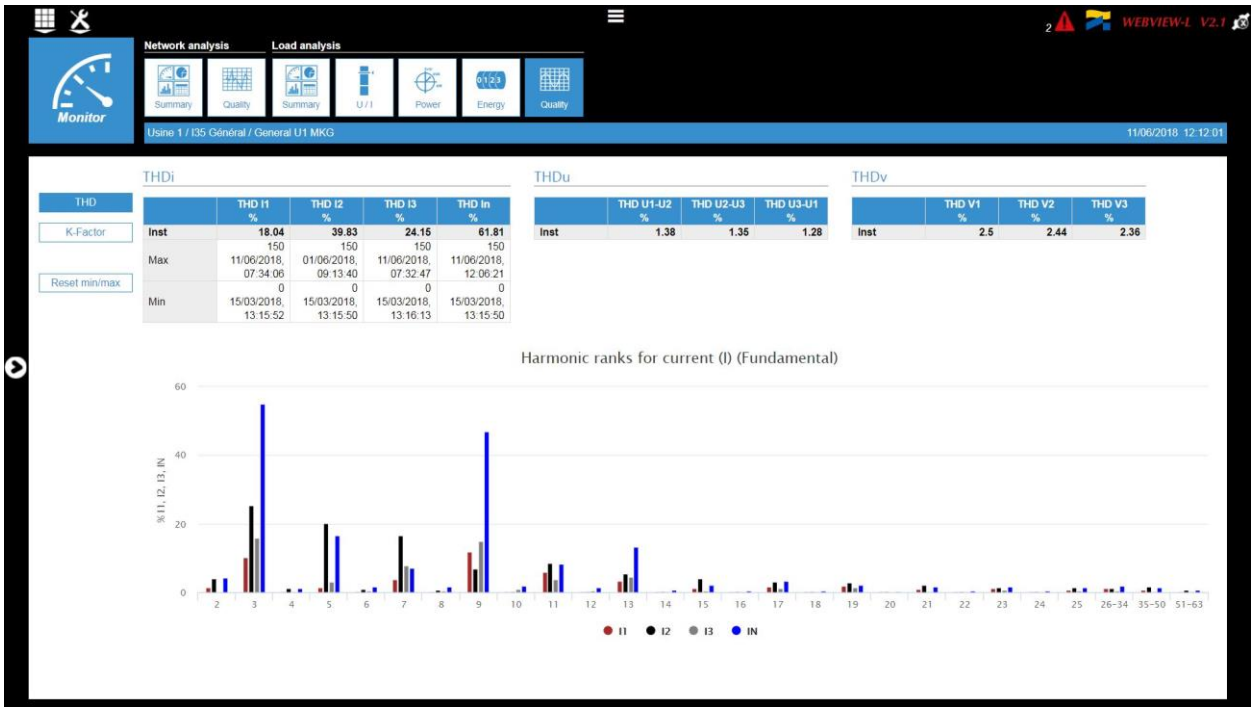
- Load Analysis Page - Energy monitoring

This page shows the energy table (Ea+, Ea-, Er+, Er-, Es) and their distribution on tariff periods.



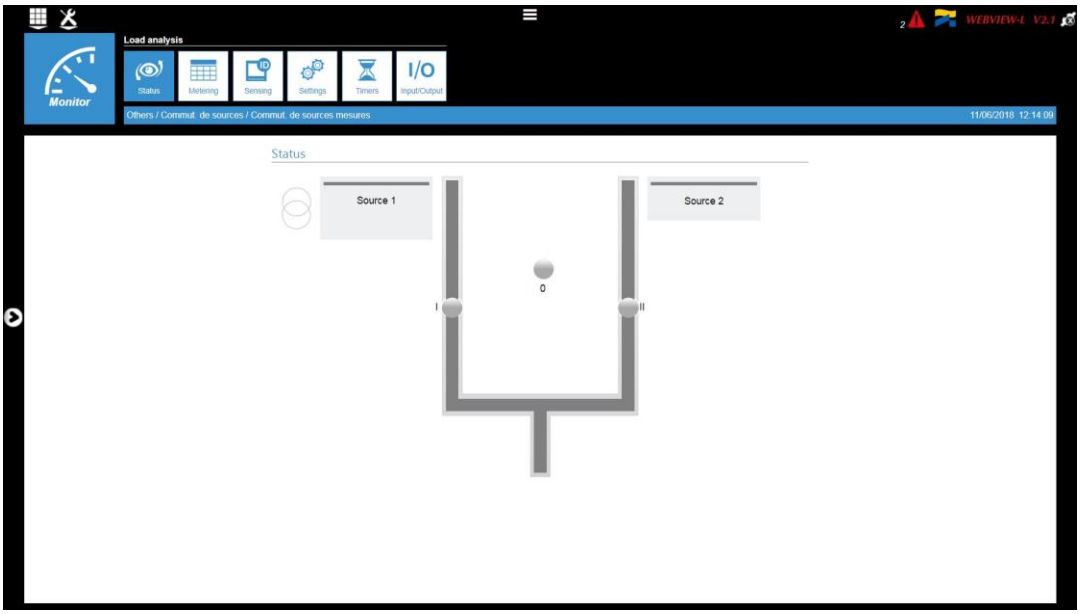
- Load Analysis Page - Quality monitoring

This page shows the total harmonic distortion (THDi) and harmonic orders I (up to order 63) including K-Factor values.



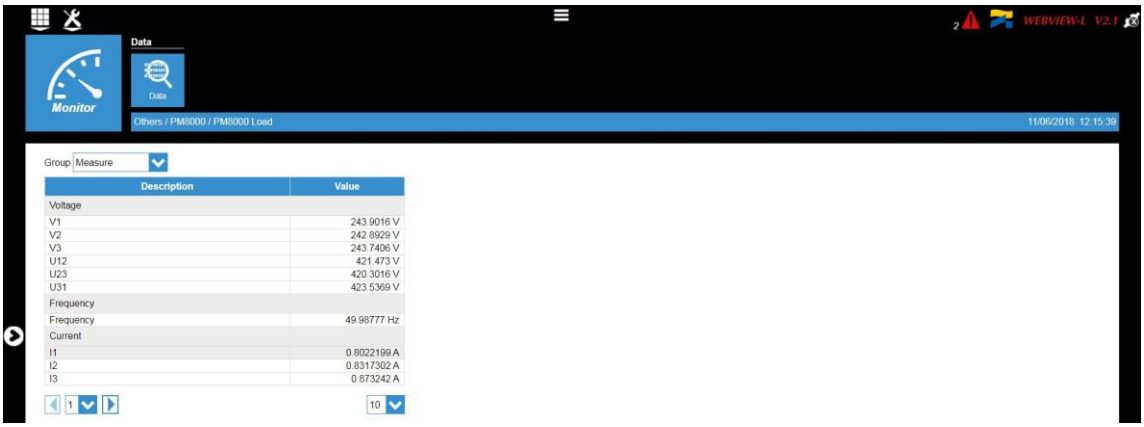
7.2.2. ATyS-p-M transfer switch monitoring

- Status page



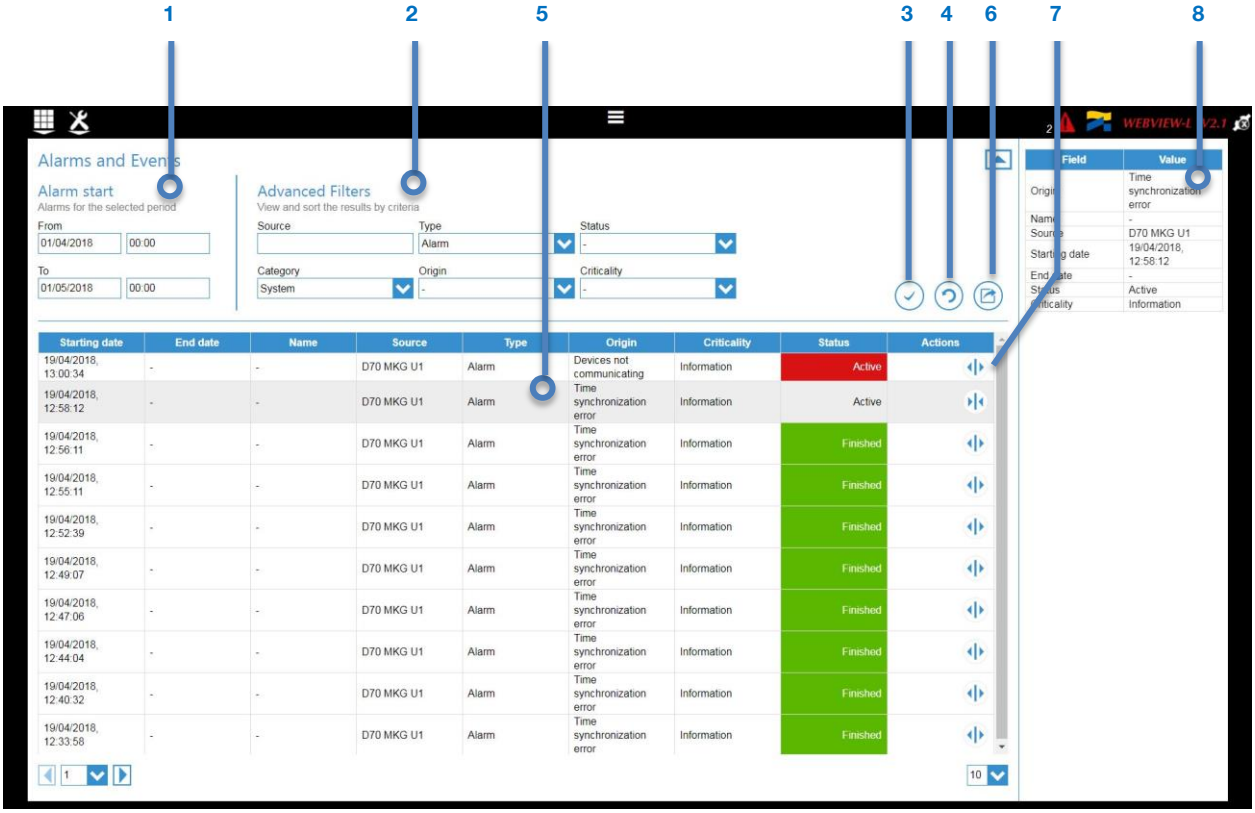
7.2.3. Monitoring from devices connected in generic Modbus

For example, the monitoring data table for a generic Modbus connected device (PowerLogic series PM8000 from Schneider Electric).



7.3. Alarms and Events

The Alarms and Events function shows alarms from SOCOMEC devices on a dashboard.



The *Alarms and Events* screen shows the following functions:

1. Selection of the Alarms and Events analysis period

2. Filtering Alarms and Events *by data source (Configured devices), by type (Alarms or Events EN 50160, by alarm category and type, by status (active, finished, finished, not acknowledged etc.), by criticality*

3. Validates the selection (period and filters)

4. Resets the selection (period and filters)

5. Displays the result of the selection

6. Exports alarm file (zip file with Alarms and Events *files)*

7. Opens the window showing details of the alarm selected (to the right of the screen)

8. Window showing alarm details

7.4. Photoview

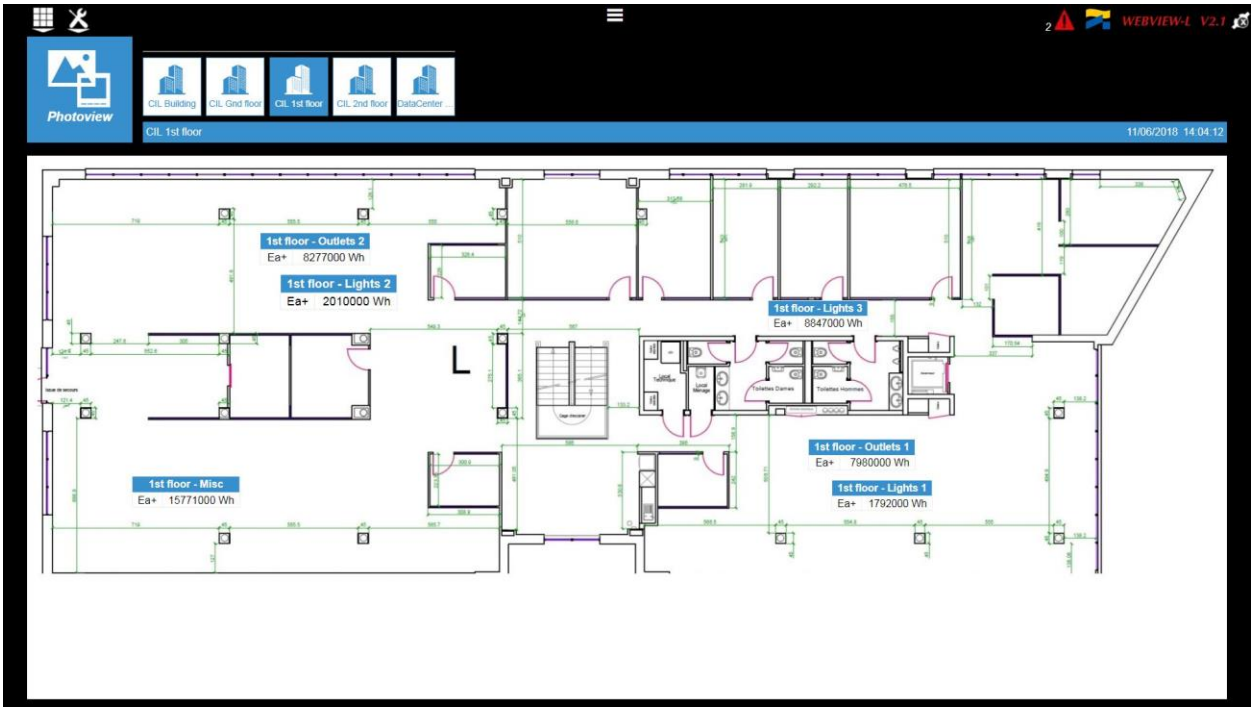
The Photoview function customises data on a background of customer images (Photo or Plan of the building, Electrical diagram, Plan etc.).

Below is a Photoview page based on an image of SOCOMEC CIL building , including links to the different floors, pictograms of devices and measurements.

1. Tabs of the different Photoview pages
2. Hypertext link to access another Photoview page: Option of creating a page directory structure
3. Info text
4. Viewing pictograms from different devices
5. Measurement table display

Below is the Photoview page of the 1st floor of SOCOMEC CIL building, based on the image of the floor plan and including various information on the measurements associated with this area.

When clicking on the various added elements (e.g. a measurement table), the user has direct access to the "Monitor" function of the associated device.



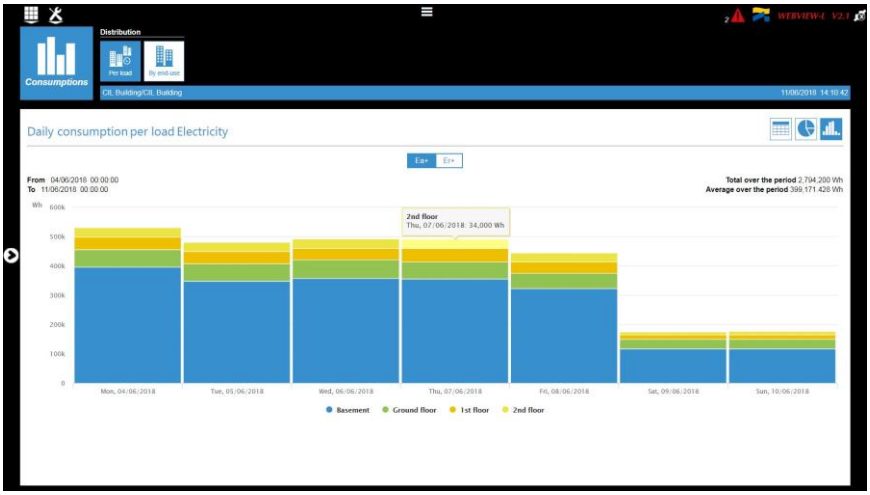
7.5. Consumptions

The Consumptions function allows the representation of the energy flows consumed by the different loads in the time periods defined.

To view the consumption data, the level in the navigation directory structure needs to be preselected and the analysis period defined (see perimeter).

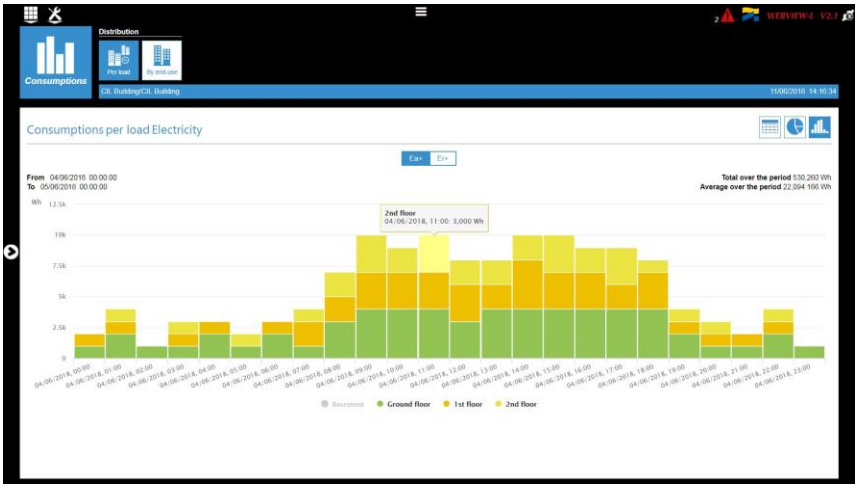
The Consumptions function offers 2 predefined **presentation modes**: by load or by use, depending on the hierarchies which have been configured. If no hierarchy has been created, there will be no distribution of consumptions. The interface will then propose a simple view of the consumptions and provide readings recorded by the devices.

For example, a presentation by load, of the consumptions of CIL building for the week of 04/06/2018 to 10/06/2018



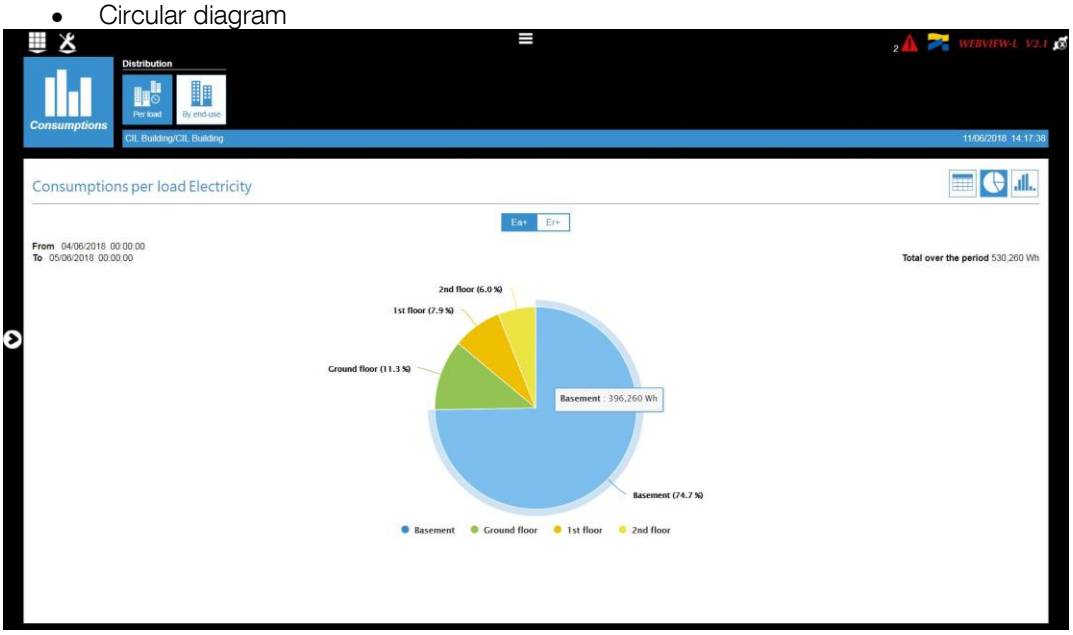
Clicking on a consumption bar shows more detailed time data:
Month -> Week -> Day -> Hour
For example, clicking on the weekly bar shows hourly consumptions.

By clicking on one of the load names (in the example: Basement 2), it is hidden from view.

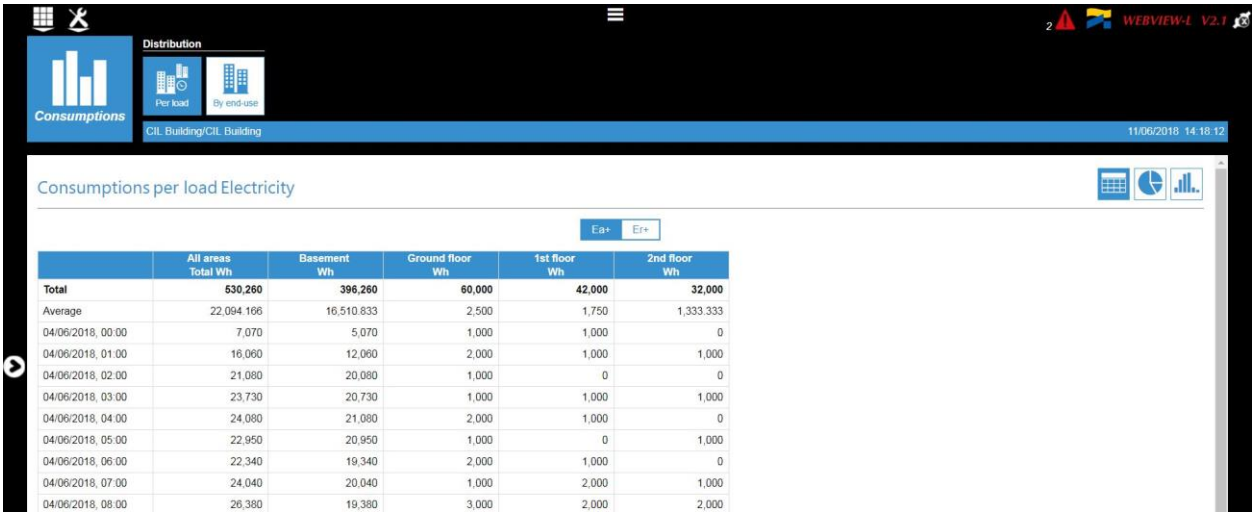


Other consumptions presentations are available:

- Circular diagram



- Table



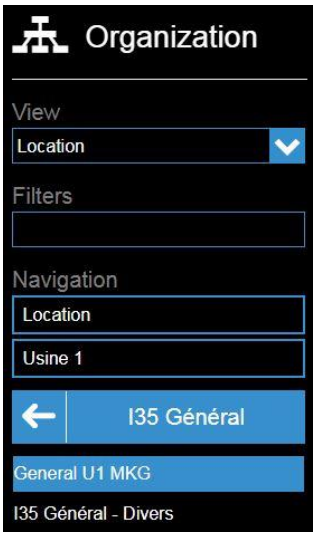
	All areas Total Wh	Basement Wh	Ground floor Wh	1st floor Wh	2nd floor Wh
Total	**530,260**	**396,260**	**60,000**	**42,000**	**32,000**
Average	22,094.166	16,510.833	2,500	1,750	1,333.333
04/06/2018, 00:00	7,070	5,070	1,000	1,000	0
04/06/2018, 01:00	16,060	12,060	2,000	1,000	1,000
04/06/2018, 02:00	21,080	20,080	1,000	0	0
04/06/2018, 03:00	23,730	20,730	1,000	1,000	1,000
04/06/2018, 04:00	24,080	21,080	2,000	1,000	0
04/06/2018, 05:00	22,950	20,950	1,000	0	1,000
04/06/2018, 06:00	22,340	19,340	2,000	1,000	0
04/06/2018, 07:00	24,040	20,040	1,000	2,000	1,000
04/06/2018, 08:00	26,380	19,380	3,000	2,000	2,000

7.6. Trends

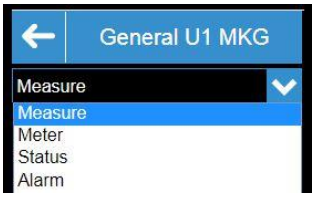
The Trends function shows the different measurements collected by the devices and logged over the time periods selected in the perimeter.

The first step involves selecting the measurements to be shown in the graph in the parameter.

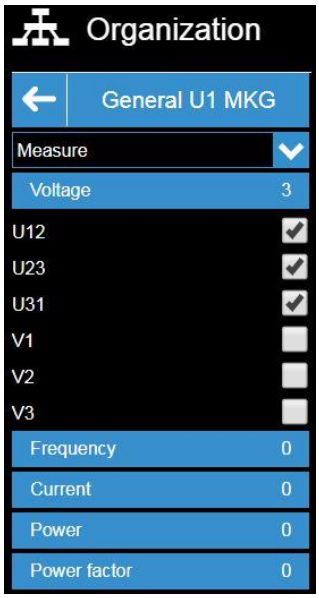
1. Select the data source (in our case module I35 General from Building U1 MKG)



2. Select the data category (Measure, Meter, Status, Alarm)

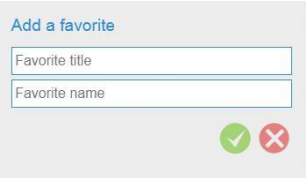


3. Check the type of data in the category



When selecting the data types, the trends are automatically tracked, on the time period selected, with scale information on both sides of the graph, according to the different units measured.
Different data types of and units can be displayed (e.g. Voltage, Current, Power etc.), from one or more devices.

1. Creating favorites: can set data selection for subsequent viewing



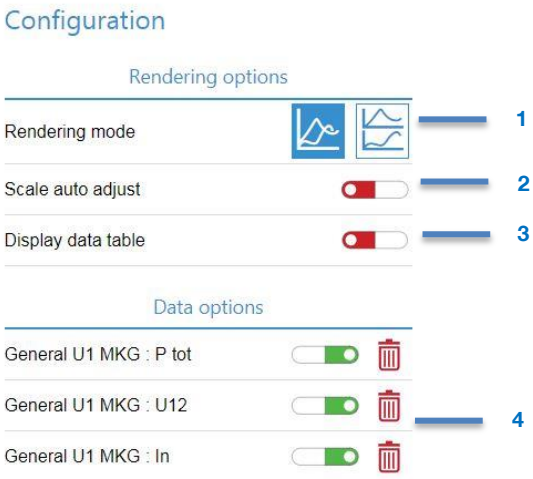
Enter a name and title for the favorite created

2. Opening the configuration section

3. List of data viewed: the graphs can be hidden/displayed by clicking on the data names

4. Selection range in the time period: there is a zoom and navigation function in the time period to more accurately select the range to be analysed

Configuration section



1. Selecting the graph type: several measurements on the same graph or different graphs superimposed on the same time period.

2. Scaling different graphs: by default the graph starts from 0, but click the selector and the graph is re-centred around the minimum and maximum value.

3. Displaying the data table in the range selected

4. Option of deselecting or deleting data

8.CONFIGURATION

You need to configure WEBVIEW-L to make the most effective use of its functions.
This part of the manual shows the different configuration operations in details.
To access the 'Devices and Hierarchies' configuration interface, you need to log in Administrator mode (Admin).

Click on the symbol

1. Customise - Profile: Changes the password

2. Customise - Configuration: Configures WEBVIEW-L

3. Diagnosis - Diagnosis

Diagnosis

1. Global: Detailed analysis of DATALOG H80/H81 settings

2. Devices - Detailed list of devices connected to the DATALOG H80/H81

3. Export diagnosis file from DATALOG H80/H81

8.1. Devices and Hierarchies

The administrator configures the DATALOG H80/H81 in this area.

By accessing their configuration area, the administrator can either create a new configuration (please note this deletes the configuration previously stored in DATALOG H80/H81), or modify the existing configuration.

1. General configuration: Return to previous page

2. Devices & Hierarchies - Source: For creating sources of data, circuits/loads and data to collect
3. Devices & Hierarchies - Models: For managing data models
4. Devices & Hierarchies - Data: For creating data
5. Devices & Hierarchies - Hierarchies: For managing hierarchies
6. Operating - Photoviews: For managing Photoview pages
7. Datalogger - System: For configuring the Datalogger function
8. Datalogger - Planning: For planning data exports

8.2. Organising data for configuring WEBVIEW-L

In order to manage up to 200 devices, it was necessary to define a data organisation facilitating WEBVIEW-L configuration.

Several concepts and definitions need to be mastered by the administrator to configure WEBVIEW-L.

8.2.1. Data model

In order not to have to configure each data collected individually for all the devices or sources of data connected to WEBVIEW-L, we created data models. These are models grouping several data according to a predefined logic or logic specific to the administrator. These models are then assigned to one or more circuits/loads to simplify the configuration of data collection.

By default, WEBVIEW-L offers 4 predefined models or templates containing fixed data:

- **Metered Energy Model** grouping together 5 data Ea+, Ea-, Er+, Er- et Es

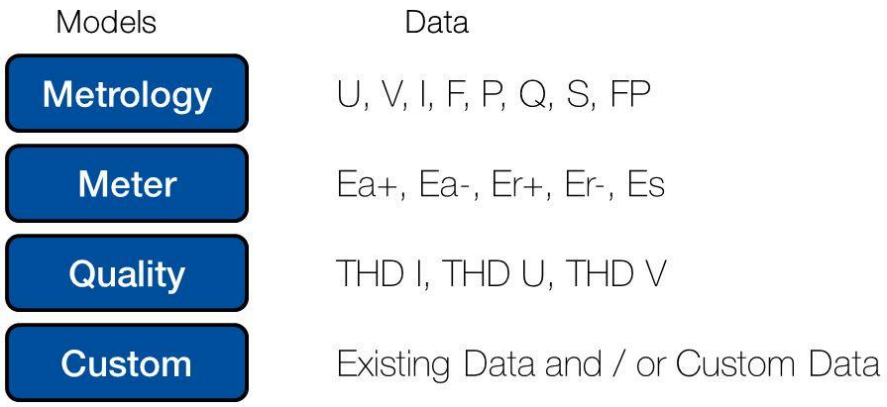
- **Metrology Model** grouping together 15 data U12, U23, U31, V1, V2, V3, I1, I2, I3, In, Ptot, Qtot, Stot, PFtot and the frequency

- **Quality Model** grouping together 10 data THDI1, THDI2, THDI3, THDIn, THDU12, THD23, THD31, TDDV1, THDV2, and THDV3

- **Load Curve Model** grouping together 5 data IPPositiveHistory, IPNegativeHistory, IQPositiveHistory, IQNegativeHistory, ISHistory

However, if these four predefined models do not suit administrator requirements, they can create "Custom" models and integrate the data they need to collect (existing data or "Custom" data).

Organisational diagram for data models



8.2.2. Data collected

By default, WEBVIEW-L integrates a list of standard data (see list in appendix 2). These are the main data available in SOCOMEC devices. These data can be used for collection from SOCOMEC devices or generic Modbus devices (subject to these devices managing these data). However, if the administrator needs to collect other data not included in the list (e.g.: pressure measurement data in bar), they can create a "Custom" data and add it to a "Custom" model.

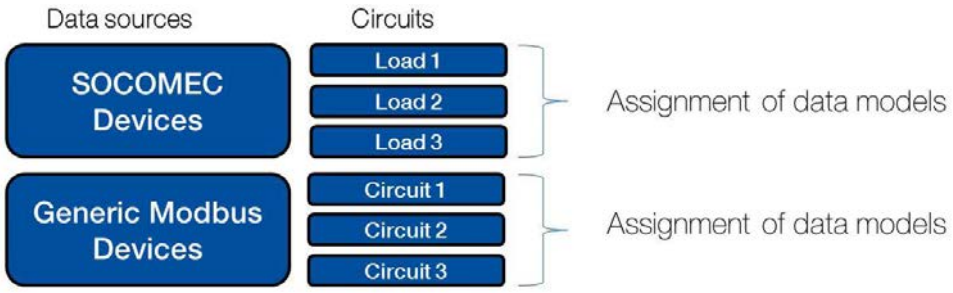
8.2.3. Data sources

The data sources define all devices which can be connected to WEBVIEW-L and for which data can be collected. Firstly, these are SOCOMEC measuring devices, but also ATyS-p-M transfer switches and potentially any device communicating with the Modbus protocol.

8.2.4. Measurement circuit

For an "Electrical" fluid, the measurement circuits correspond to the different loads associated with a device (e.g. the 6 single-phase loads associated with a DIRIS Digiware I60 device). But this may also be counting cubic metres in "Gas" or "Water" fluid circuits. In order to collect the data, the administrator associates one or more data models to each circuit.

8.2.5. Organisation diagram for data sources and measurement circuits



8.2.6. Automatic detection of SOCOMEC devices

In order to simplify the configuration of SOCOMEC devices connected to WEBVIEW-L, the administrator can use the "Auto discovery" function. The purpose of this function is to launch a procedure to detect all SOCOMEC communication gateways (DIRIS G, DIRIS D50, DIRIS D70…), but also devices behind these gateways, connected to the same Ethernet network as the H80/81 hosting WEBVIEW-L. This detection is able to feedback all information configured in the various devices detected to WEBVIEW-L. This avoids re-entering data already available in the devices (device name, location, IP address, Modbus address, name of circuits, fluid, use etc.).

Please note: In order for the automatic detection of SOCOMEC devices to work, all devices (communication gateways and measurement devices) must be preconfigured.

8.2.7. Generic Modbus devices

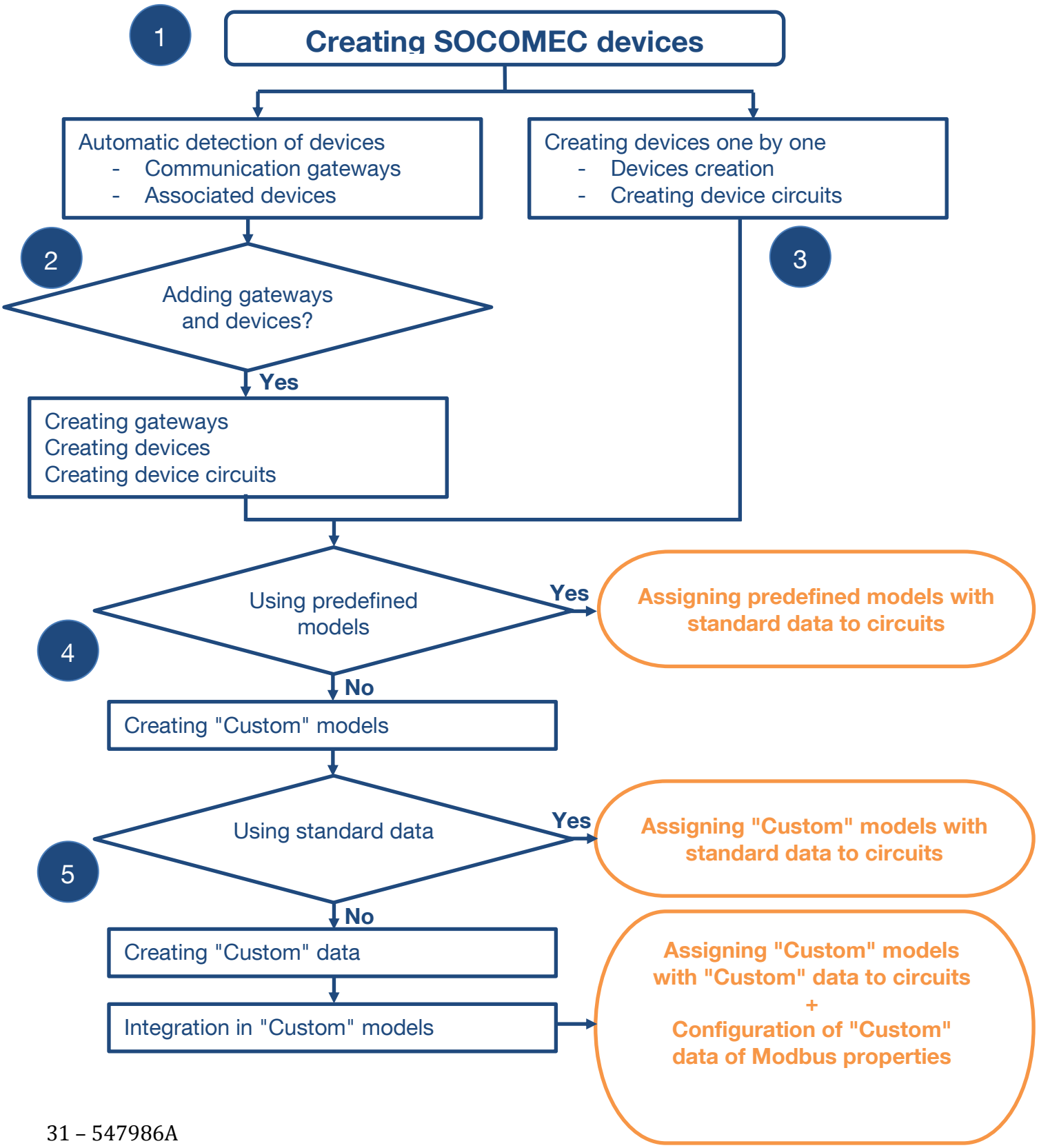
Generic Modbus devices are all devices communicating with the Modbus protocol (other than the SOCOMEC devices stored in WEBVIEW-L), and which are able to feedback data to WEBVIEW-L. These may be other brands of measurement devices, previous generation SOCOMEC devices for which the data are not stored in WEBVIEW-L or potentially any other device communicating in Modbus. In order to configure these devices, their Modbus specifications need to be known and entered (Modbus register address of data collected, read function, frame type etc.).

8.3. Creating SOCOMEC devices

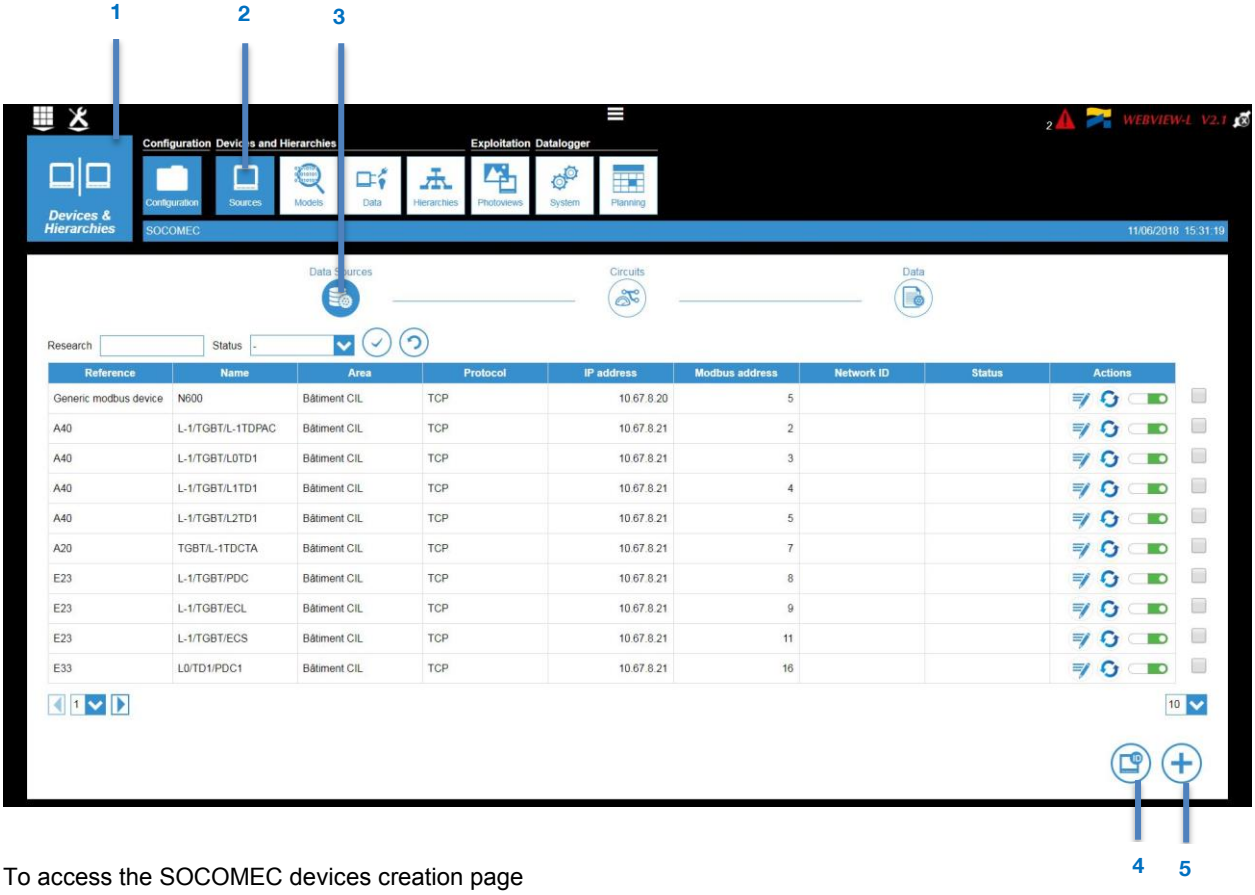
Pages 31 to 41 describe step-by-step the process for creating SOCOMEC devices in WEBVIEW-L

In order to create SOCOMEC devices in WEBVIEW-L, there are 2 options available to the administrator:

- Creating SOCOMEC devices using the "Auto discovery " function
- Creating devices one by one



1 8.3.1. SOCOMEC devices creation page



To access the SOCOMEC devices creation page

1. Select the "Devices & Hierarchies" page in the "Configuration" section

2. Select the "Source" page

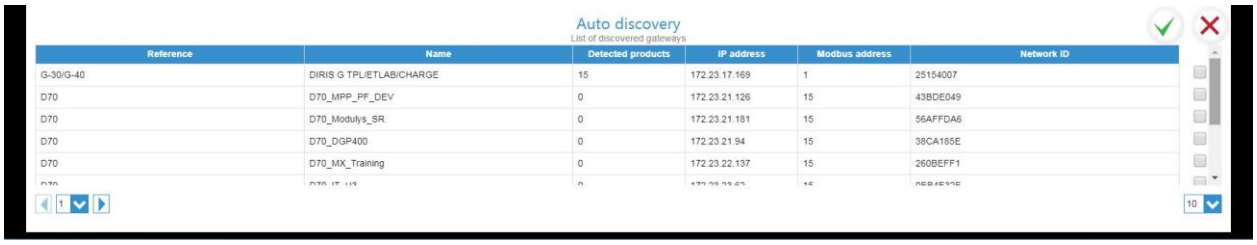
3. Select the "Data source" sub-menu

4. Click the symbol for the "Auto discovery SOCOMEC devices" function

5. Click the symbol for creating devices one by one

2 8.3.2. Creating SOCOMEC devices using the "Auto discovery" function

The communication gateways discovered by the "Auto discovery" function are displayed at the bottom of the page (one line per gateway), with the number of SOCOMEC devices behind each gateway.



The administrator can select the gateways discovered with the devices associated and add them to the list of data sources. This operation can also create the associated measurement circuits for each device (e.g. to create a A-40, the system will create a single measurement circuit, whereas for a I-35 it will create 3 measurement circuits). The information associated with these measurement circuits (name, fluid and usage), if available with the devices, are automatically fed back to WEBVIEW-L.

3 8.3.3. Creating SOCOMEC devices one by one

The administrator selects the reference of the device to create and enters the different fields associated with this device (Name, Zone, Protocol, IP address and Modbus address).

After validating the line, the device is added to the list of data sources and, as with the "Auto discovery" function, the associated measurement circuits are created, with the information available with the device.

The different SOCOMEC device references that can be created this way are:

Passerelles
- D-50
- D70
- G-30/G-40
- G-50/G-60

DIRIS B
- B-30 RF
- B-30 RS485
- B10

DIRIS Digiware
- D-40
- I-30
- I-30 dc
- I-31
- I-33
- I-35
- I-35 dc
- I-43
- I-45
- I-60
- I-61
- IO-10
- IO-20
- U-10
- U-20
- U-30
- U-31 dc
- U-32 dc

COUNTIS
- Ci
- E03
- E04
- E13
- E14
- E23
- E24
- E33
- E34
- E43
- E44
- E44R
- E53
- ECI2
- ECI3

DIRIS A
- A-10
- A-20
- A-30
- A-40
- A-40 Ethernet
- A-40 Profibus
- A14
- A17
- A17 2In
- A17 THD
- A17 THD 2In
- A60
- A80

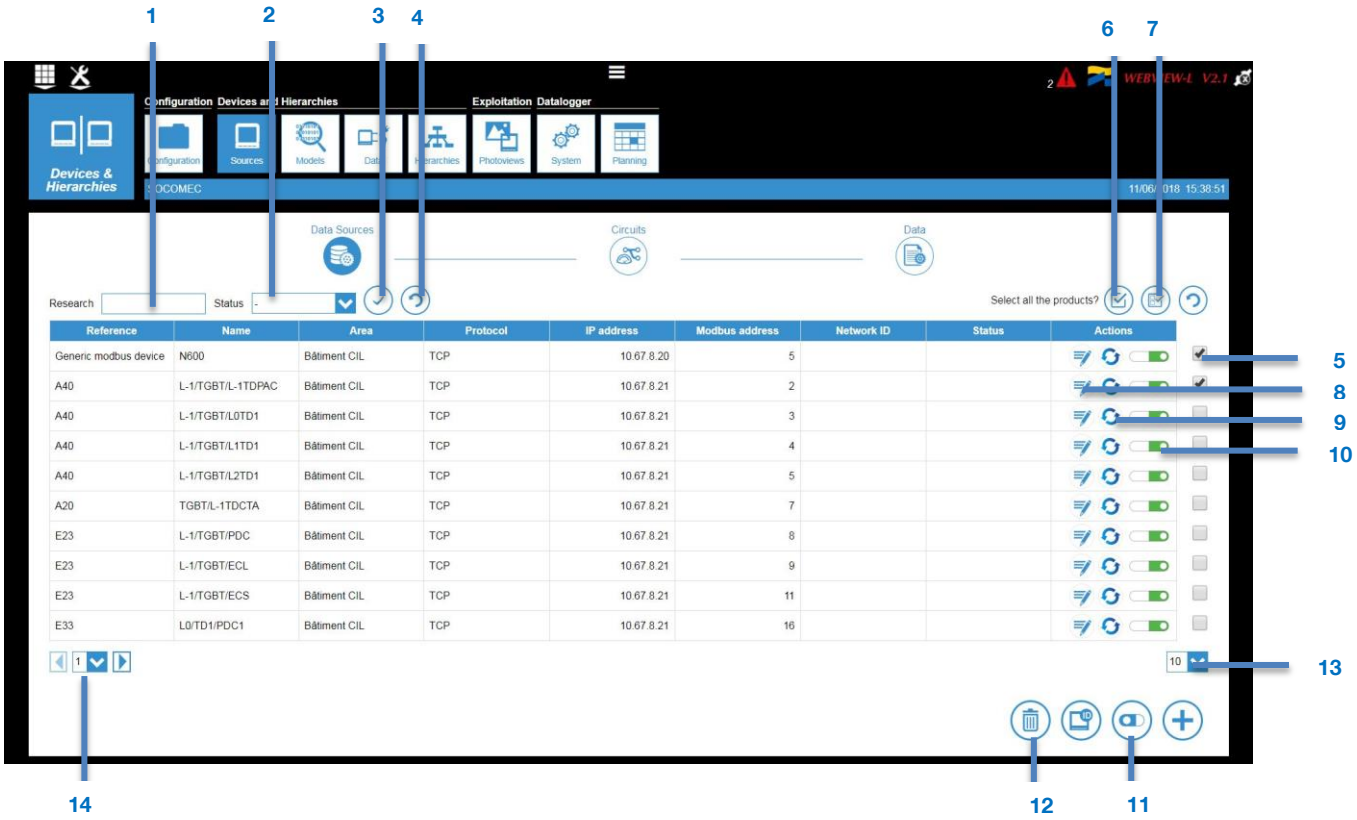
Anciens Diris A
- A10
- A20
- A20V2
- A40
- A40V2

Autre
- ATySpM
- Produit Modbus générique

When the administrator has created the devices, they can access:

- Devices management - "Source" page - "Data source" tab
- Measurement/load circuits management - "Source" page - "Circuit" tab
- Managing data collected - "Source" page - "Data" tab

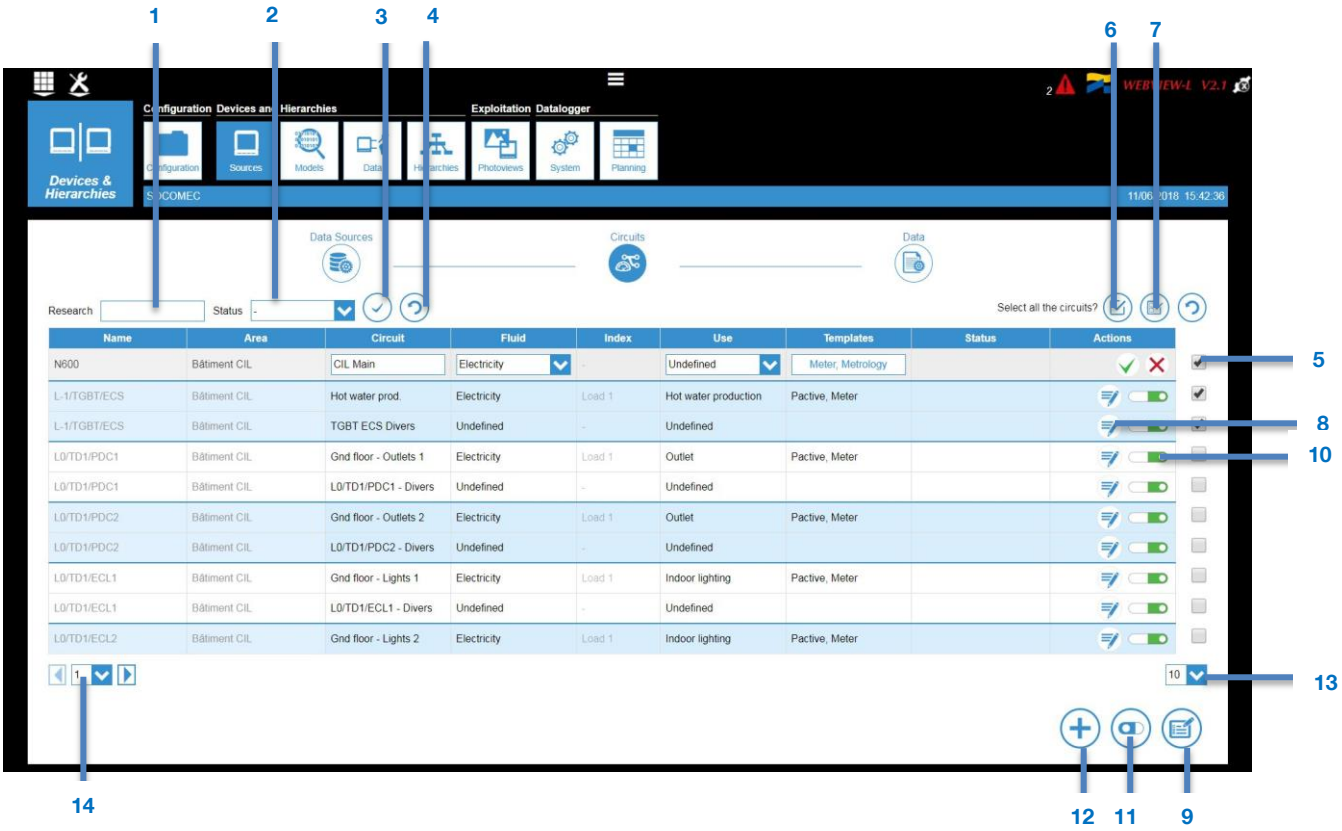
8.3.4. Device management - "Source" page - "Data source" tab



In the "Data sources" pages, the administrator can manage all information associated with the devices:

1. *Device search by name*
2. *Select the devices by status (Enabled/Disabled)*
3. *Validate the selection and/or the search*
4. *Display all devices*
5. *Select a device*
6. *Select all devices on the page*
7. *Select all devices on all pages*
8. *Modify the fields of the device selected*
9. *Refresh the line*
10. *Disable the device*
11. *Disable all selected devices*
12. *Delete all selected devices*
13. *Define the number of lines per page*
14. *Move from one page to the other*

8.3.5. Managing measurement circuits



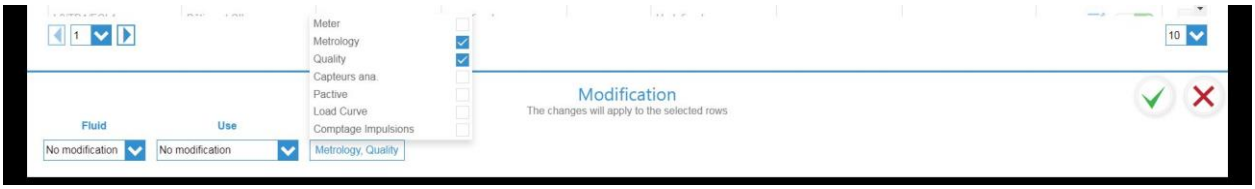
In the page listing the different measurement circuits for the devices (grouping together the circuits of the same device by colour), the administrator can:

1. *Search a circuit by its name*
2. *Select the devices by status (Enabled/Disabled)*
3. *Validate the selection and/or the search*
4. *Display all the circuits*
5. *Select a circuit*
6. *Select all the circuits on the page*
7. *Select all the circuits on all pages*
8. *Modify the fields of the circuit selected (name, fluid, usage and models)*
9. *Modify the fields of the circuits selected (fluid, usage and models)*
10. *Disable the circuit*
11. *Disable all selected circuits*
12. *Add a circuit (for generic Modbus devices only)*
13. *Define the number of lines per page*
14. *Move from one page to the other*

In order to ensure the data history of data circuits, the administrator must assign one or more data models to each circuit (predefined model or "custom" model):

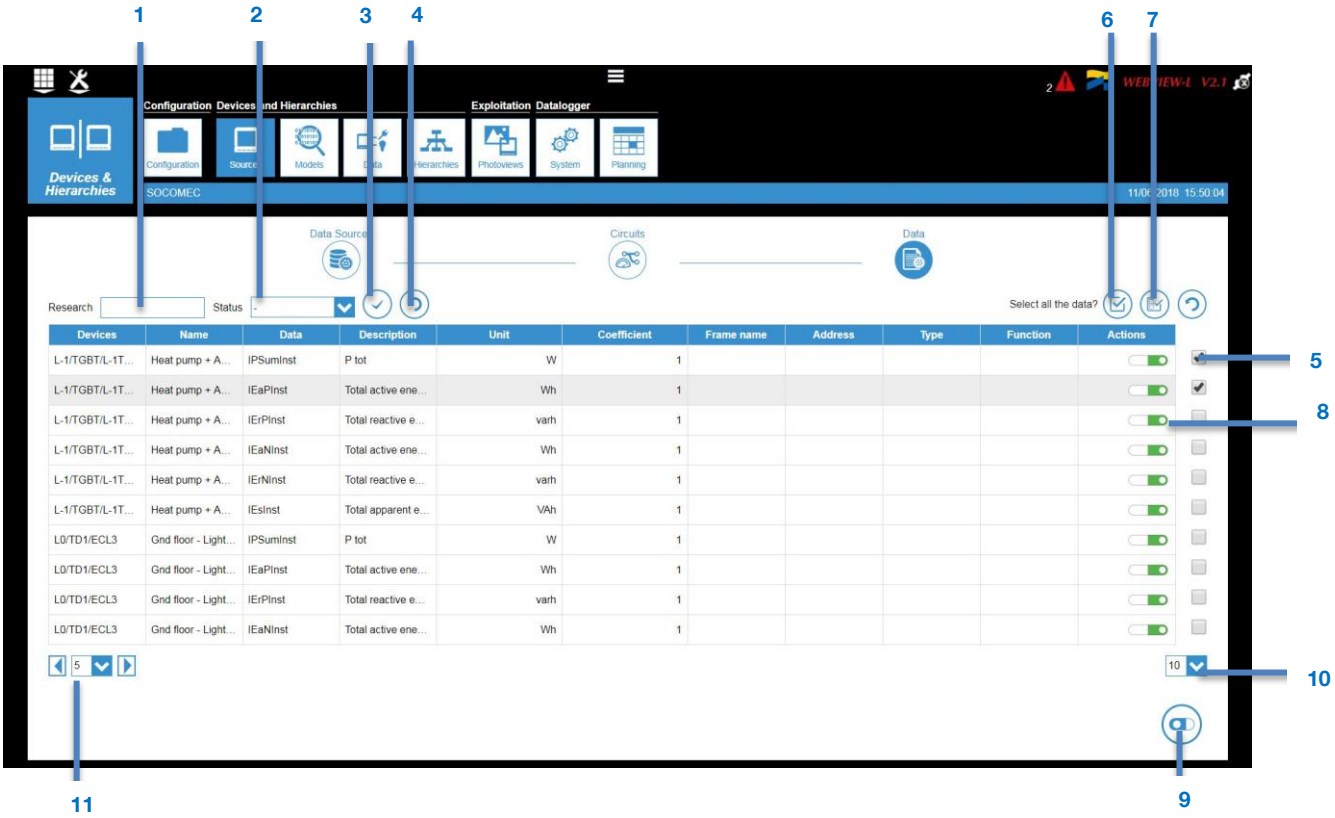
- by an individual assignment, selecting a "5" circuit,

- or selecting several "6" or "7" circuits and assigning the model(s) "9".



See below "Managing data models"

8.3.6. **Managing collected data**

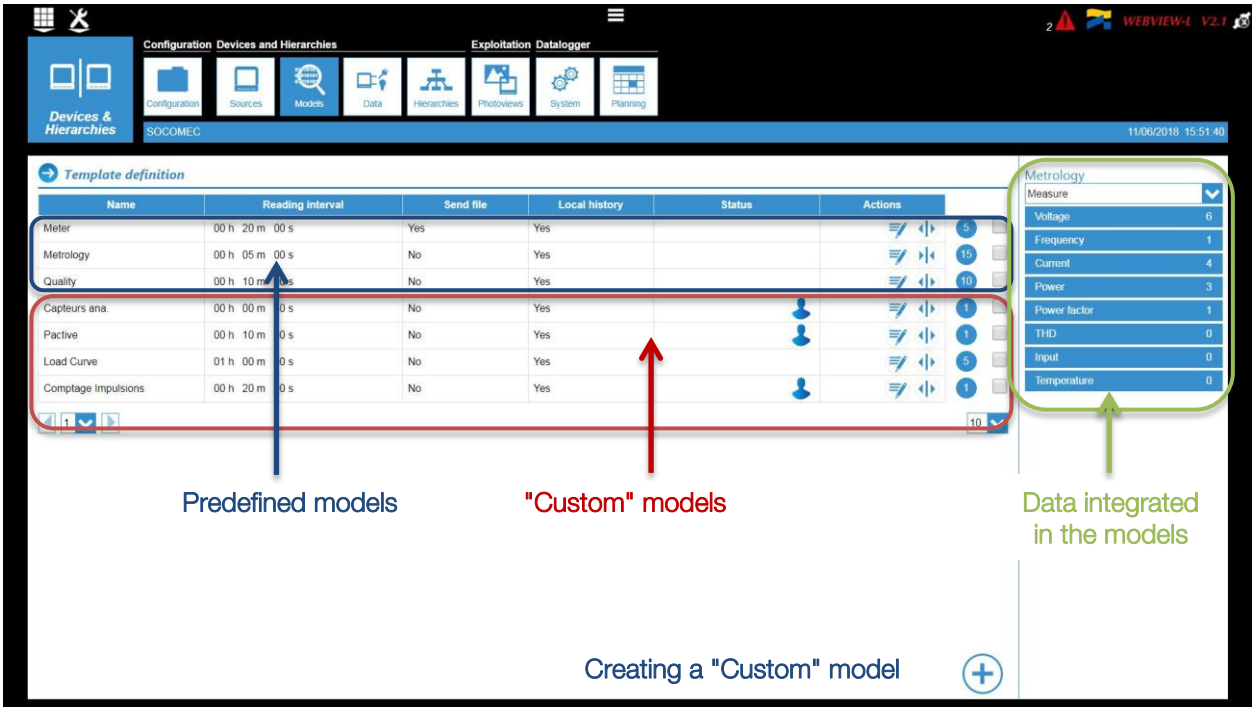


In the page listing all the data assigned to the measurement circuits of data sources, the administrator can:

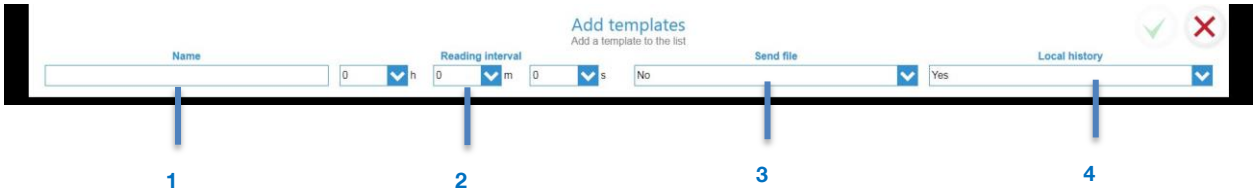
1. *Search data by device, circuit or data name*
2. *Select the data by status (Enabled/Disabled)*
3. *Validate the selection and/or the search*
4. *Display all data*
5. *Select data*
6. *Select all the data on the page*
7. *Select all the data on all pages*
8. *Disable a data*
9. *Disable all the data selected*
10. *Define the number of lines per page*
11. *Move from one page to the other*

8.3.7. Creating data models

By default WEBVIEW-L includes 4 predefined models (Metered Energy, Metrology, Quality, Load Curves), but if the predefined models do not meet requirements, the administrator can create their own "Custom" models.

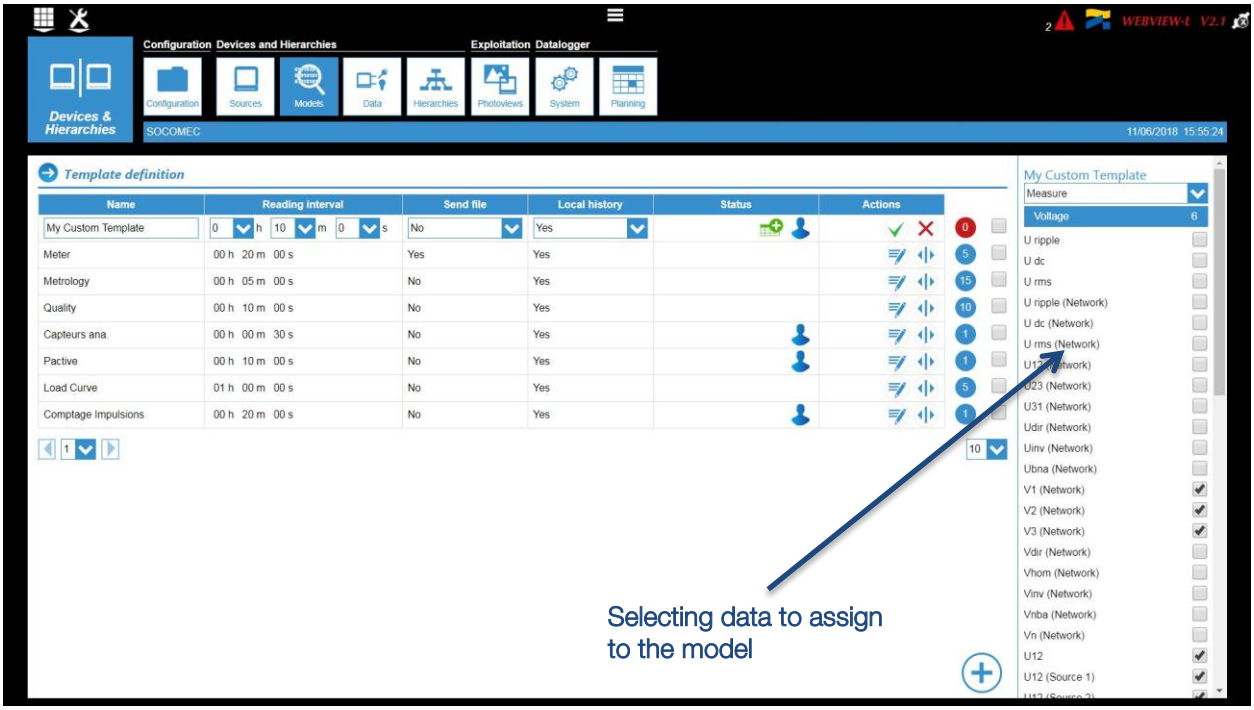


Adding a model



1. *Indicate the name of the "Custom" model*
2. *Define the data history period (in hours, minutes and seconds*
3. *Datalogger function: Send data to a third party server*
4. *Data history for the "Trends" and "Consumption" functions*

As soon as the "Custom" model has been created, the administrator can select the data to assign to this model by clicking "Modify" on the line of the model concerned.



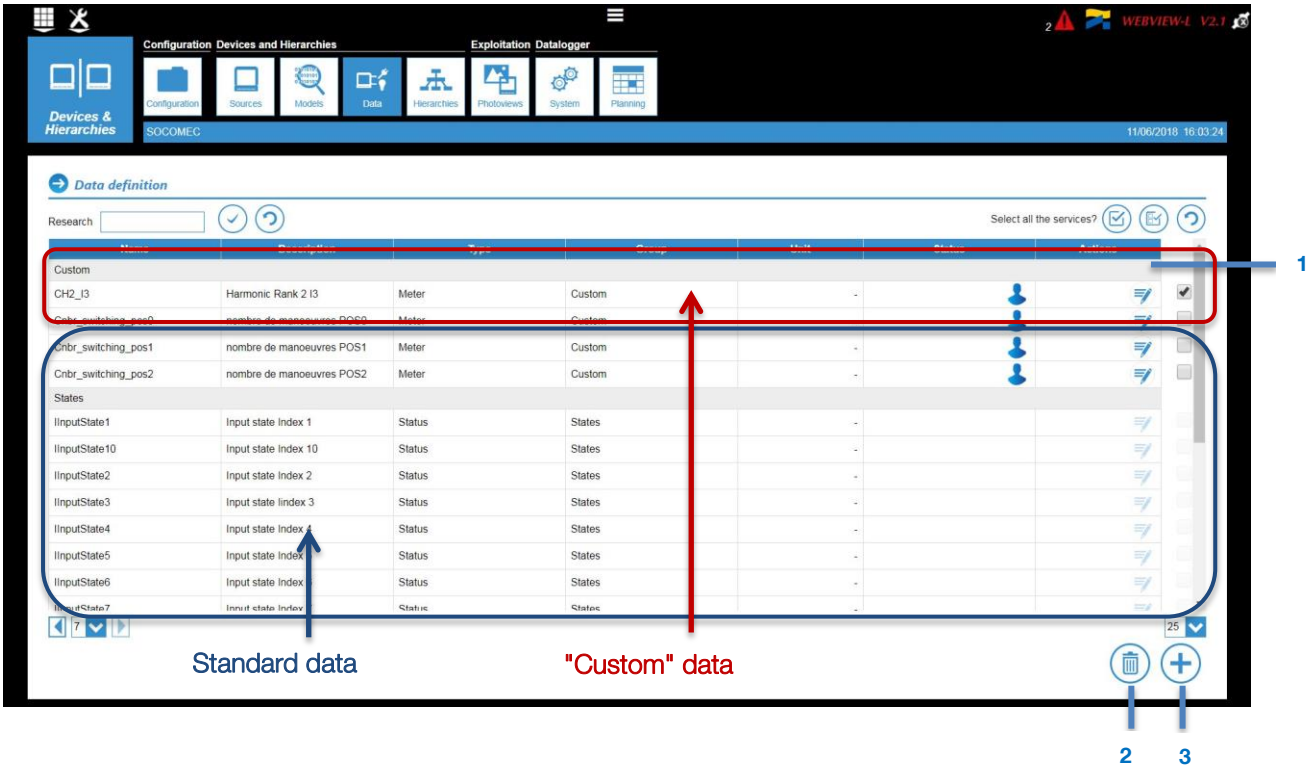
5 8.3.8. Creating "Custom" data

By default, WEBVIEW-L includes the principal data available in the SOCOMEC devices. These data are organised as follows:

Data Type	Group	No. of data
Measure	Voltage	34
	Frequency	4
	Current	13
	Power	17
	Power factor	4
	THD	21
	Input	10
	Temperature	10
Meter	Energy	11
	History	6
Status	States	10
Alarm	Alarm	8

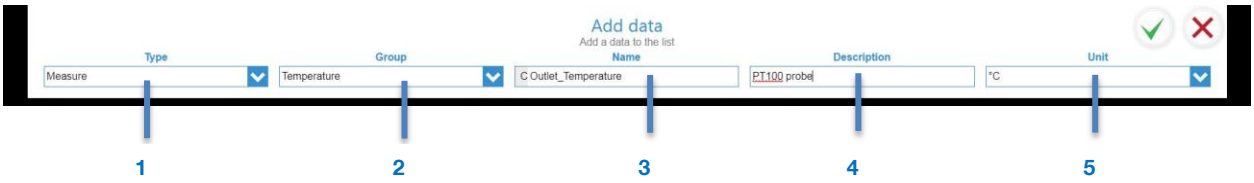
(See Appendix 2, the list of all standard data managed in WEBVIEW-L)

If the standard data do not meet requirements, the administrator can create their own "Custom" data. For example, the creation of a temperature data."



1. *Modify the fields (Description, Group, Unit) of the "Custom" data selected*
2. *Delete the "Custom" date selected*
3. *Creating a new "Custom" data*

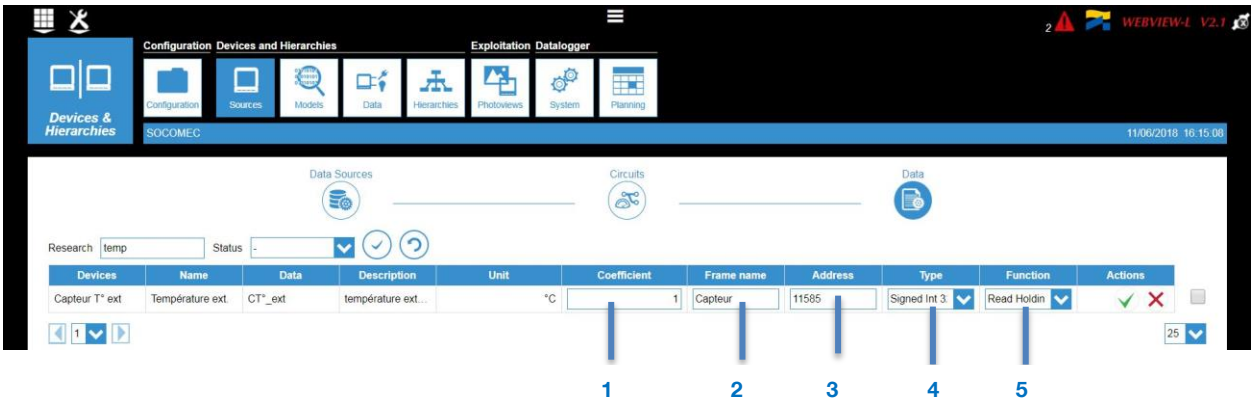
Screen for adding "Custom" data



1. *Select the type of data*
2. *Select the group according to the type of data selected (if no group corresponds to the data created, select "Custom"*
3. *Indicate a name for the data*
4. *Indicate the description of the data*
5. *Select the unit of the data*

To be able to collect the "Custom" date created in the different measurement circuits:

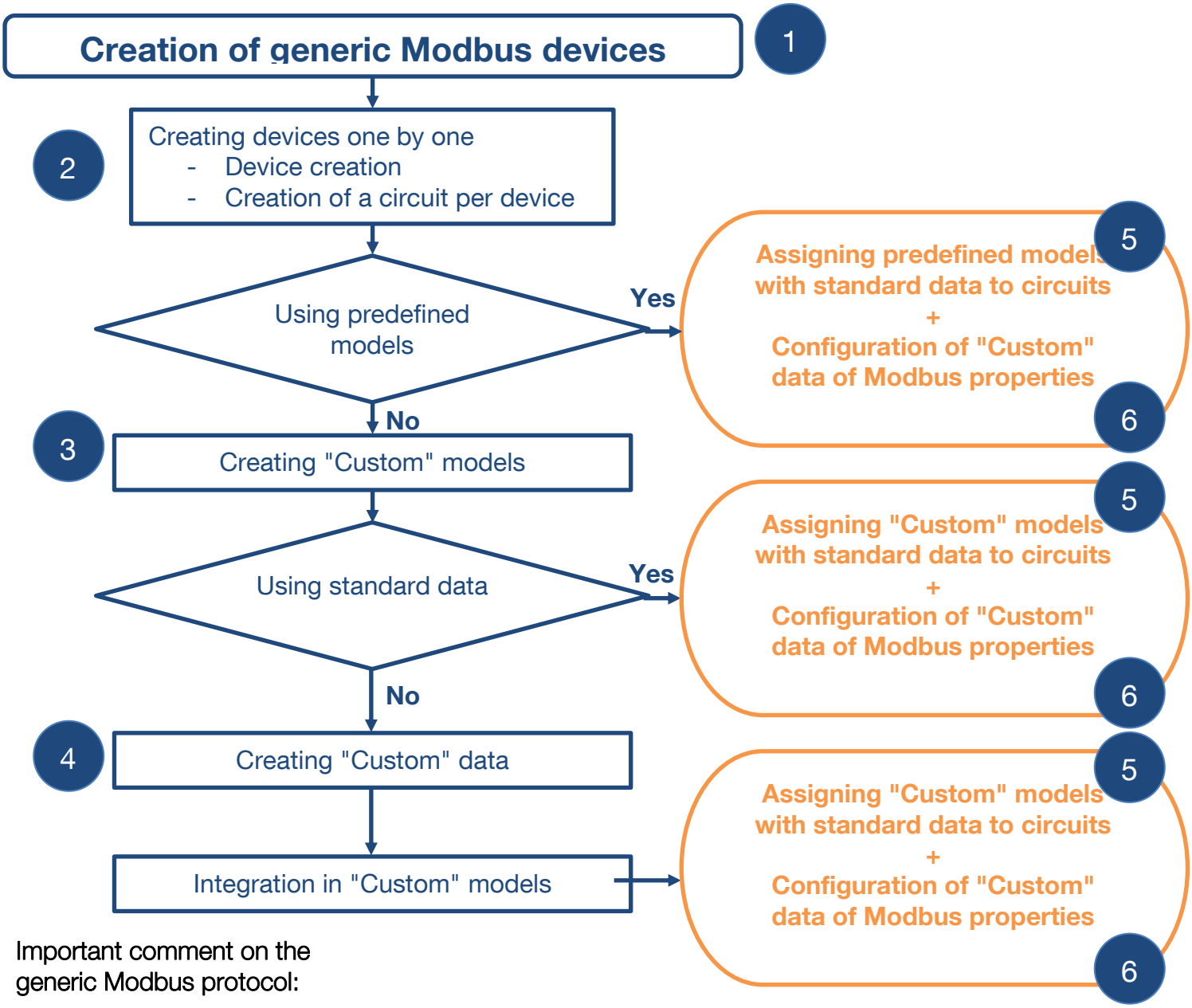
1. Add these data to a "Custom" data model or create a specific "Custom" model (see section "Managing data models").
2. Assign the model containing the "Custom" data to the measurement circuits for which these data must be collected (see section "Managing data models".
3. Configure the Modbus properties in the "Data" tab on the "Source" page (see below).



1. *Indicate the unit conversion coefficient (e.g.: convert a "Custom" data expressed in kW in W - enter 1000 in the "Coefficient" field*
2. *This "Frame Name" field groups together and collects all the "Custom" data from the same Modbus table via a single request. A name of your choice must be entered for all the "Custom" data of the Modbus. (This action limits the Modbus requests and therefore considerably shortens the WEBVIEW-L response times).*
3. *Indicate the address of the Modbus register of the "Custom" data*
4. *Indicate the type of coding of the Modbus frame*
5. *Indicate the Modbus function*

8.4. Creation of generic Modbus devices

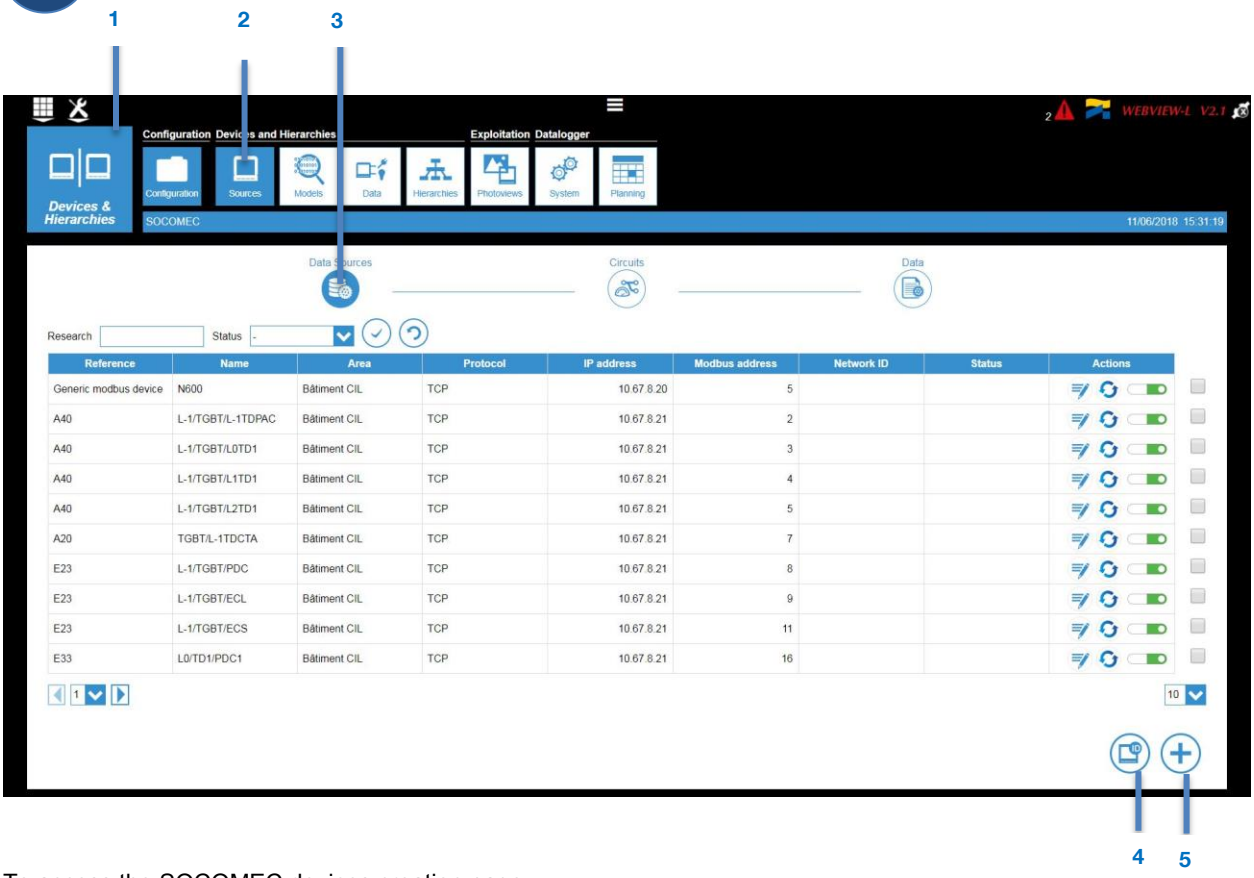
Pages 42 to 50 describe step-by-step the process for creating generic Modbus devices in WEBVIEW-L



Important comment on the generic Modbus protocol:

In WEBVIEW-L, reading a value coded on several bytes respects the big-endian format.

1 8.4.1. Device creation page



To access the SOCOMEC devices creation page

1. Select the "Devices & Hierarchies" page in the "Configuration" section

2. Select the "Source" page

3. Select the "Data source" sub-menu

4. Click the symbol for the "Auto discovery SOCOMEC devices" function

5. Click the symbol for creating devices one by one

2 8.4.2. Creating generic Modbus devices one by one

The administrator clicks on the icon for creating devices one by one, selects the "Generic Modbus devices" at the bottom of the list and completes the different fields associated with this device (Name, Zone, Protocol, IP address and Modbus address)

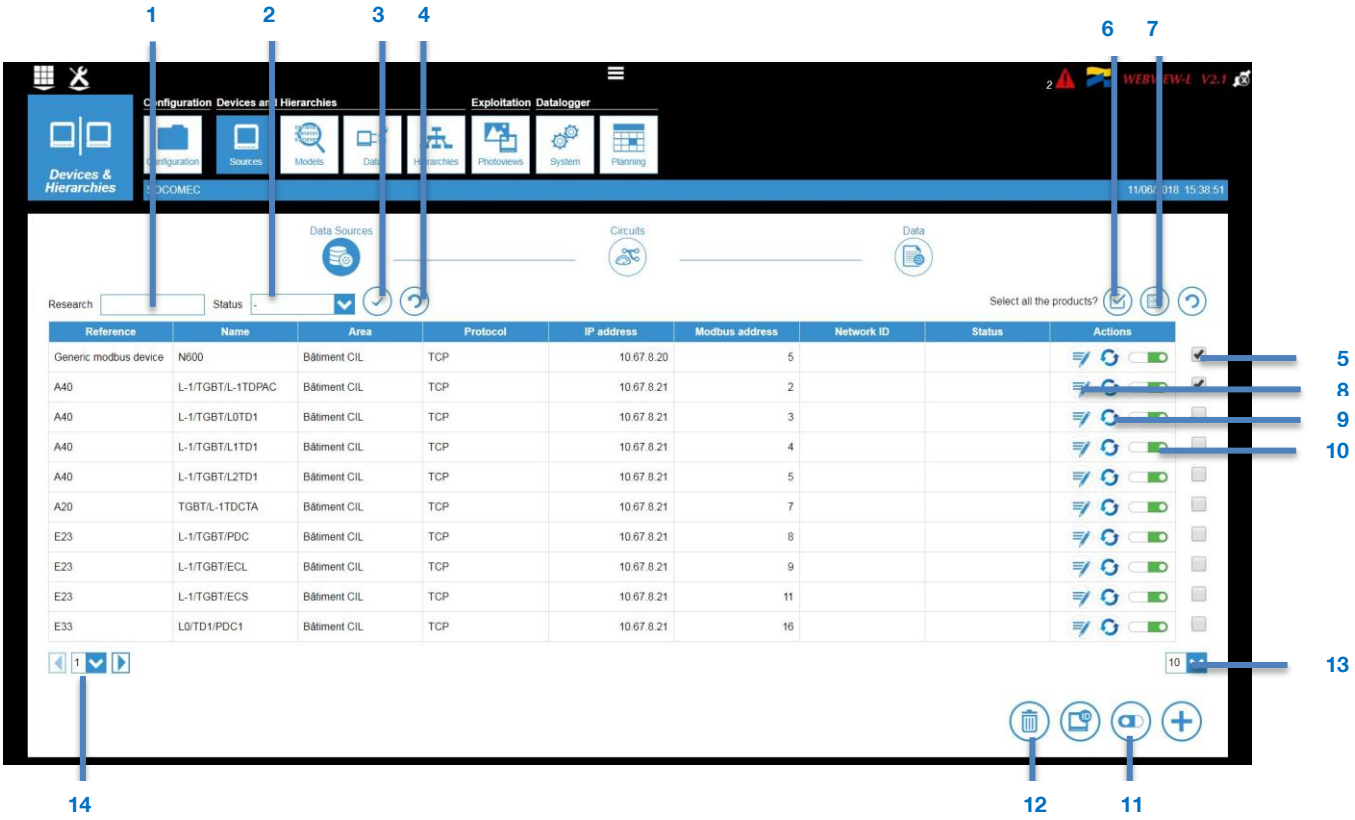
After validating the line, the device is added to the list of data sources and an associated measurement circuit is created.

When the administrator has created the generic devices, they can access:

- device management - "Source" page - "Data source" tab
- load circuits management- "Source" page - "Circuit" tab

The information from the "Data" tab will be entered subsequently after creating "Custom" data.

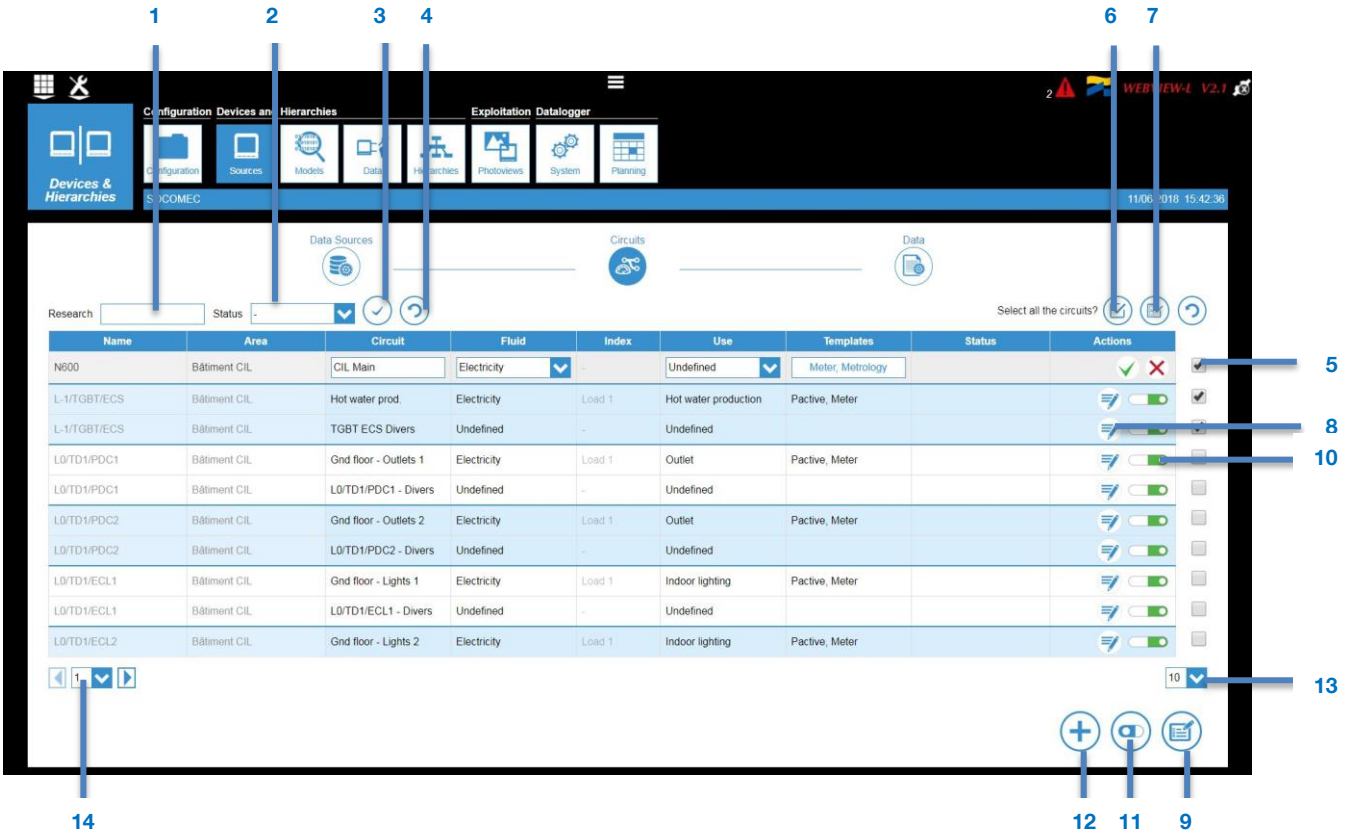
8.4.3. Device management - "Source" page - "Data source" tab



In the "Data sources" pages, the administrator can manage all information associated with the devices:

15. *Device search by name*
16. *Select the devices by status (Enabled/Disabled)*
17. *Validate the selection and/or the search*
18. *Display all devices*
19. *Select a device*
20. *Select all devices on the page*
21. *Select all devices on all pages*
22. *Modify the fields of the device selected*
23. *Refresh the line*
24. *Disable the device*
25. *Disable all selected devices*
26. *Delete all selected devices*
27. *Define the number of lines per page*
28. *Move from one page to the other*

8.4.4. Measurement circuit management

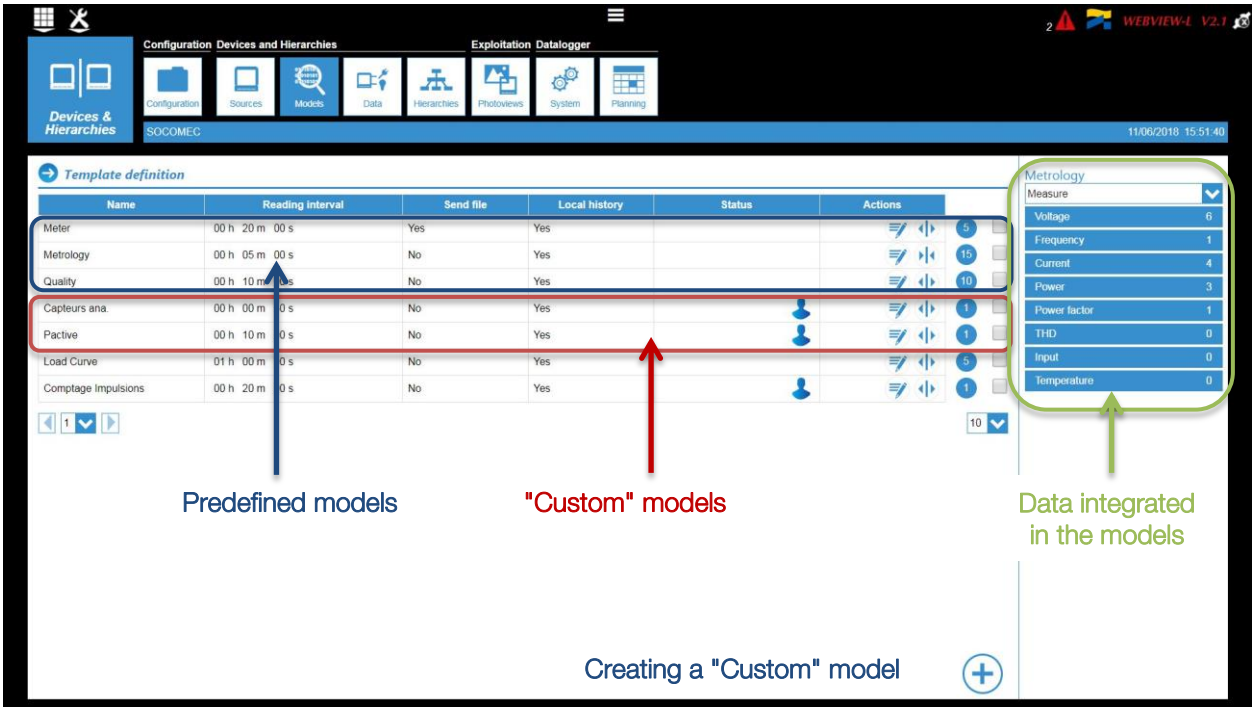


On the page listing the different measurement circuits for the devices (grouping together the circuits of the same device by colour), the administrator can:

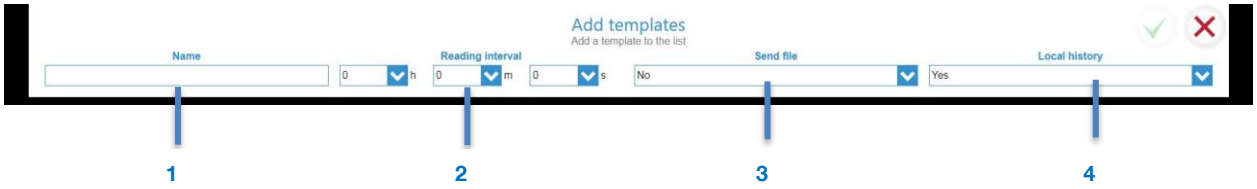
15. *Search a circuit by its name*
16. *Select the devices by status (Enabled/Disabled)*
17. *Validate the selection and/or the search*
18. *Display all the circuits*
19. *Select a circuit*
20. *Select all the circuits on the page*
21. *Select all the circuits on all pages*
22. *Modify the fields of the circuit selected (name, fluid, usage and models)*
23. *Modify the fields of the circuits selected (fluid, usage and models)*
24. *Disable the circuit*
25. *Disable all selected circuits*
26. *Add a circuit (for generic Modbus devices only)*
27. *Define the number of lines per page*
28. *Move from one page to the other*

3 8.4.5. Creating data models

By default WEBVIEW-L includes 4 predefined models (Meter, Metrology, Quality, Load Curves), but if the predefined models do not meet requirements, the administrator can create their own "Custom" models.

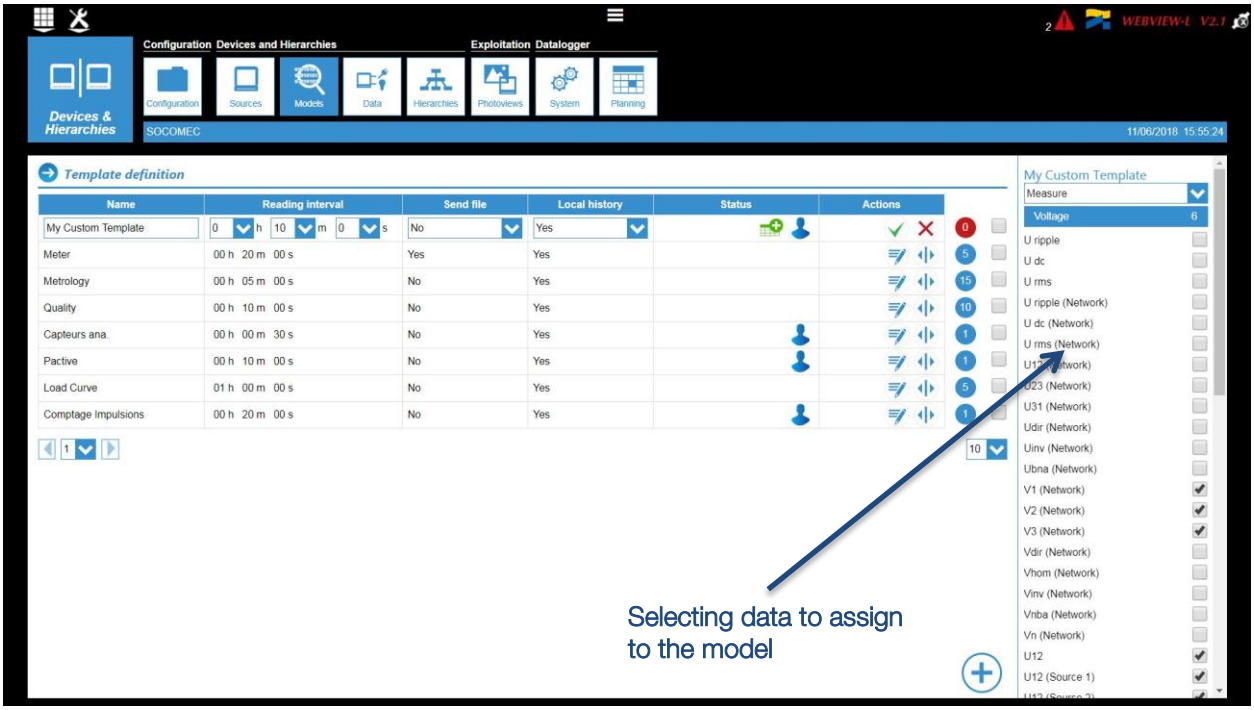


Adding a model



5. *Indicate the name of the "Custom" model*
6. *Define the data history period (in hours, minutes and seconds*
7. *Datalogger function: Send data to a third party server*
8. *Data history for the "Trends" and "Consumption" functions*

As soon as the "Custom" model has been created, the administrator can select the data to assign to this model by clicking "Modify" on the line of the model concerned.



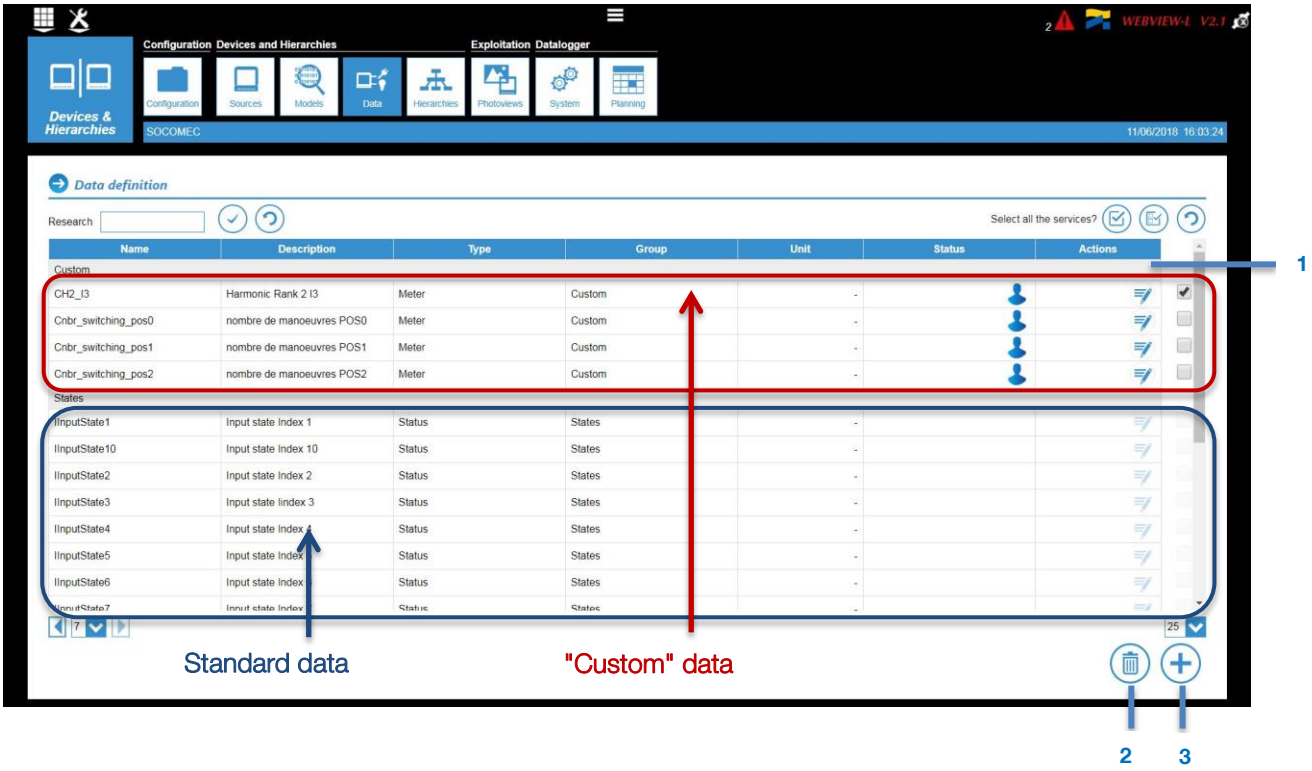
4 8.4.6. Creating "Custom" data

By default, WEBVIEW-L includes the principal data available in the SOCOMEC devices. These data are organised as follows:

Data Type	Group	No. of data
Measure	Voltage	34
	Frequency	4
	Current	13
	Power	17
	Power factor	4
	THD	21
	Input	10
	Temperature	10
Meter	Energy	11
	History	6
Status	States	10
Alarm	Alarm	8

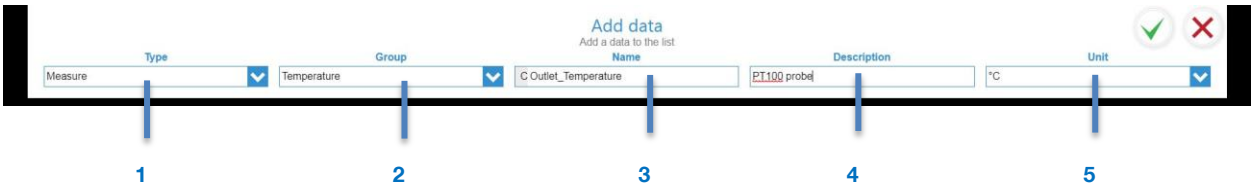
(See Appendix 2, the list of all standard data managed in WEBVIEW-L)

If the standard data do not meet requirements, the administrator can create their own "Custom" data. For example, the creation of a temperature data."



4. *Modify the fields (Description, Group, Unit) of the "Custom" data selected*
5. *Delete the "Custom" date selected*
6. *Creating a new "Custom" data*

Screen for adding "Custom" data



6. *Select the type of data*
7. *Select the group according to the type of data selected (if no group corresponds to the data created, select "Custom")*
8. *Indicate a name for the data*
9. *Indicate the description of the data*
10. *Select the unit of the data*

When the administrator has made a decision to:

- use the predefined data models or create their own data models,
- and use the available data or create their own data,

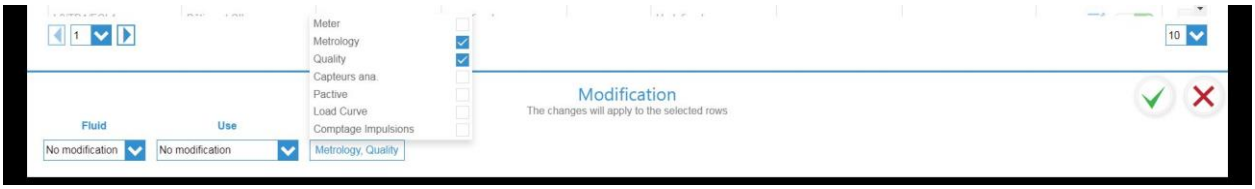
5

they need to assign the data models to the measurement circuits in the "Circuit" tab on the "Source" page.

This assignment can be done

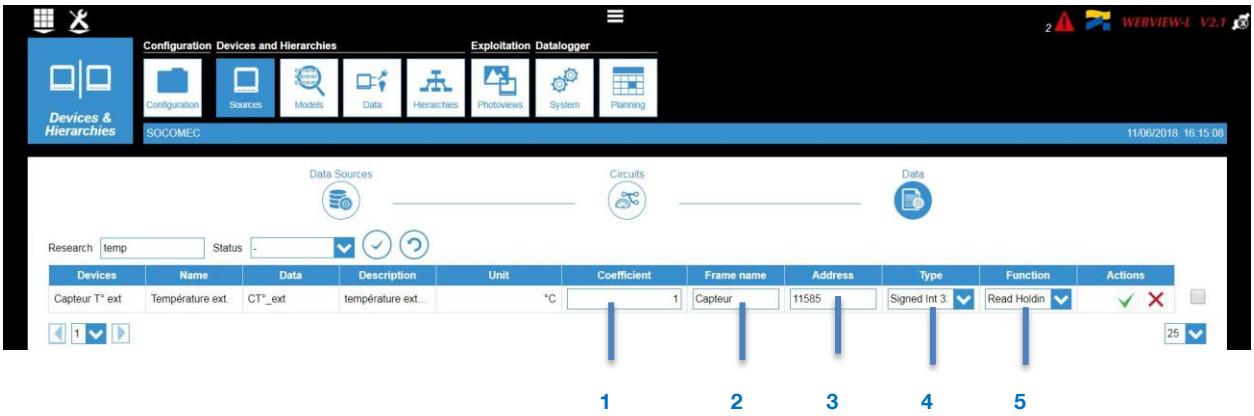
- circuit by circuit,

- or by selecting several circuits and assigning the model(s).



6

They also need to configure the Modbus properties in the "Data" tab on the "Source" page (see below).



1. *Indicate the unit conversion coefficient (e.g.: convert a "Custom" data expressed in kW in W - enter 1000 in the "Coefficient" field*
2. *This "Frame Name" field groups together and collects all the "Custom" data from the same Modbus table via a single request. A name of your choice must be entered for all the "Custom" data of the Modbus. (This action limits the Modbus requests and therefore considerably shortens the WEBVIEW-L response times).*
3. *Indicate the address of the Modbus register of the "Custom" data*
4. *Indicate the type of coding of the Modbus frame*
5. *Indicate the Modbus function*

8.5. Hierarchies

The Hierarchies organize the metering points in the form of a tree structure, giving you a functional view of the loads.

The hierarchy generally represents a geographical organisation (site =>buildings=>zones), so you can show flow distribution by zone.

Other views are also possible: electric tables, services of an organisation, etc.

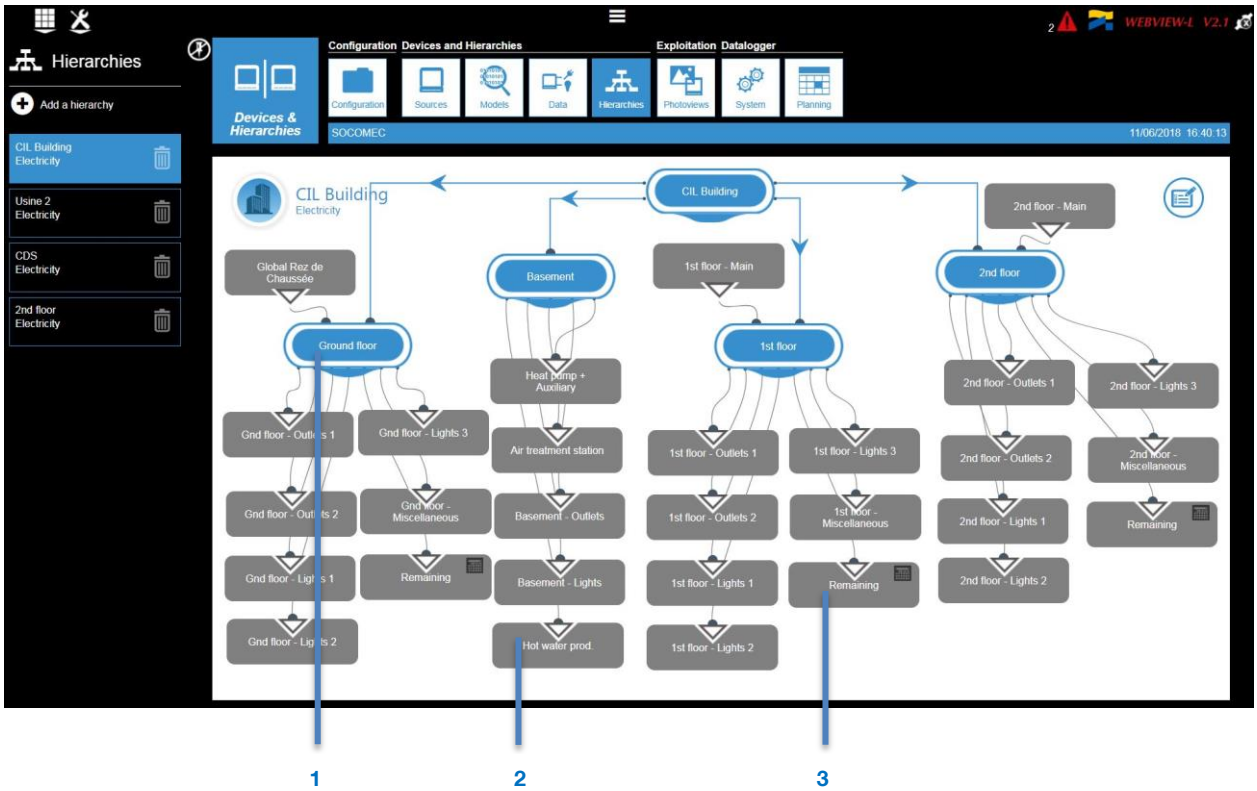
8.5.1. Construction rules

The hierarchy is constructed from the following 3 elements:

- Node: Forms the tree structure over several hierarchical levels (max. 32 per hierarchy)
- Hierarchy: Creates "father-son" hierarchical type links between different hierarchies in order to be able to show more complex multi-level hierarchies with different measurement points (example of multi-level hierarchy: Campus - Buildings - Floors - Wings)
- Loads: Corresponding to the available metering points by the devices
- Unmeasured point: Automatic calculation of an unmeasured load.

The rules for the construction of hierarchies are as follows:

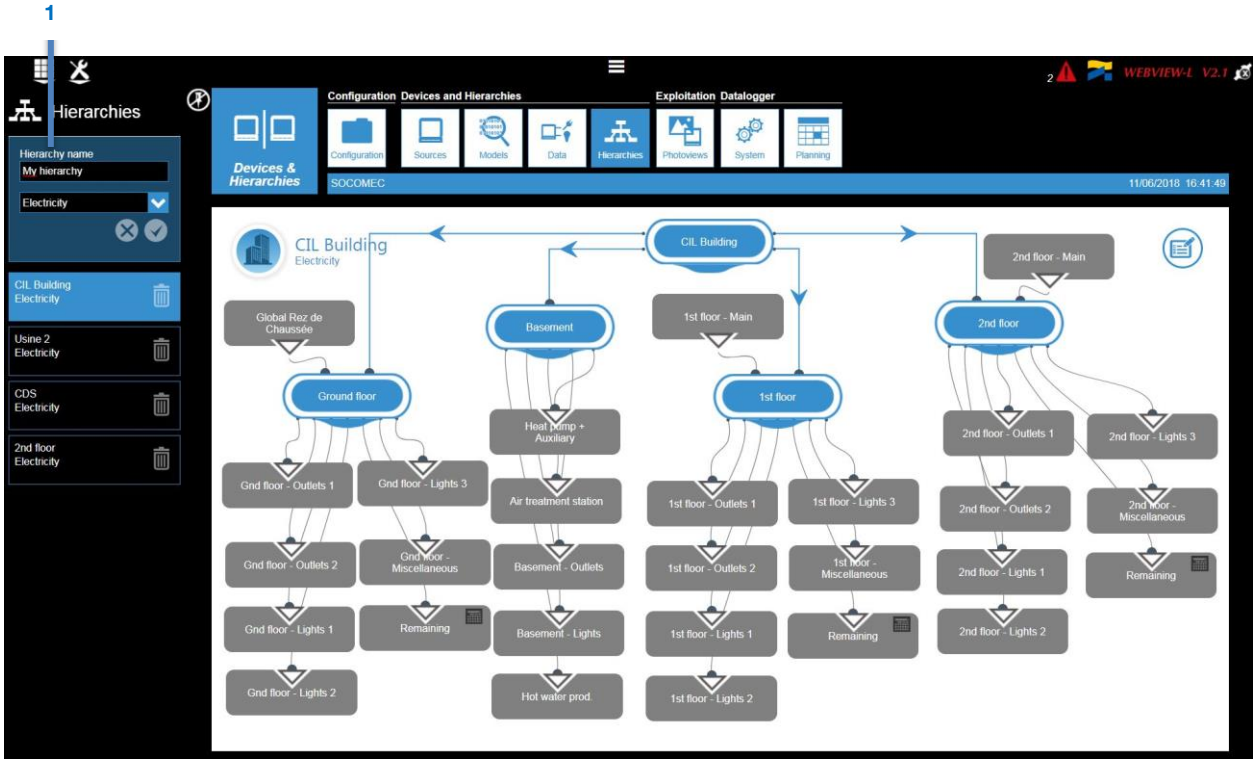
- A hierarchy is single-fluid (e.g.: Electricity) and cannot combine several fluids (water, gas, electricity)
- 10 different hierarchies can be created
- The hierarchies can be linked together to create hierarchies at different levels (Level 1, 2, 3…). This is key for managing large networks, for example.



1. *Node*
2. *Load*
3. *Unmeasured point = (Global 1st floor - all the loads measured on floor 1)*

1. Creating a new hierarchy.

To create a new hierarchy, the administrator enters a name and select the fluid (1). When validated, a new hierarchy is created, including the principal node of the hierarchy.



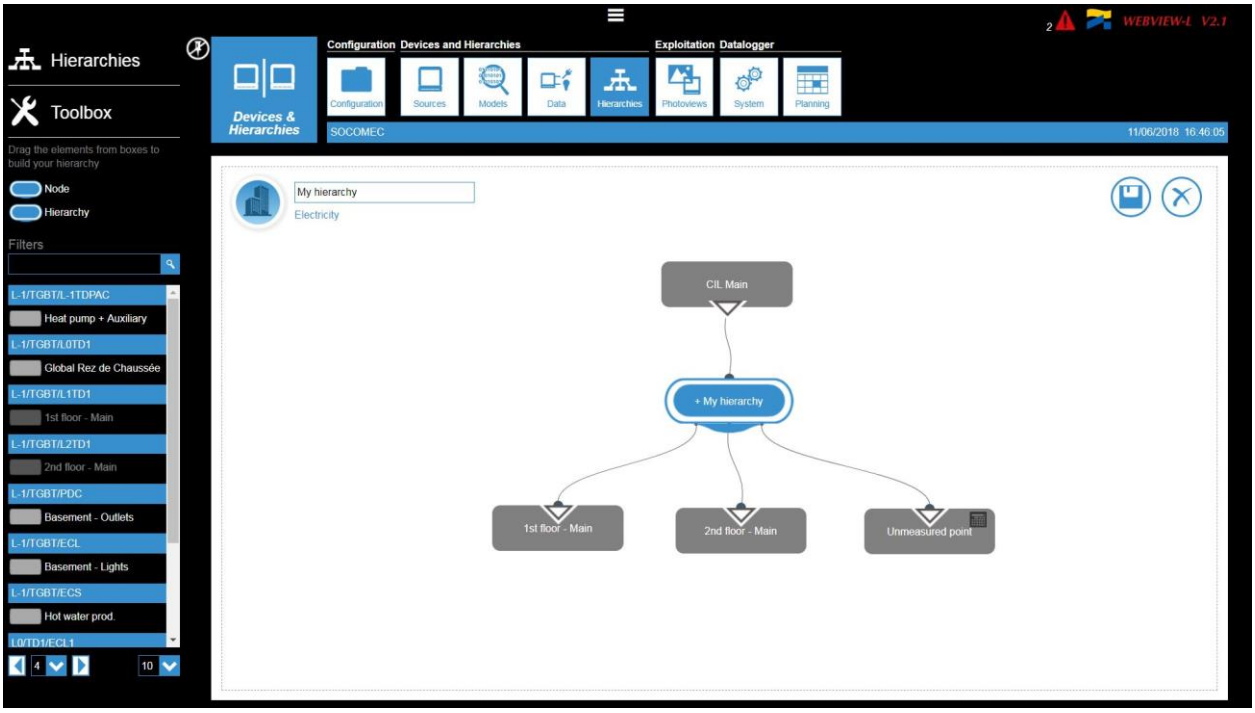
2. Constructing the hierarchy

In order to construct their hierarchy, the administrator has different bricks in the menu on the left (Node, Hierarchy and Load). The administrator simply "drags and drops", the bricks onto the hierarchy construction page and creates the links between the bricks.

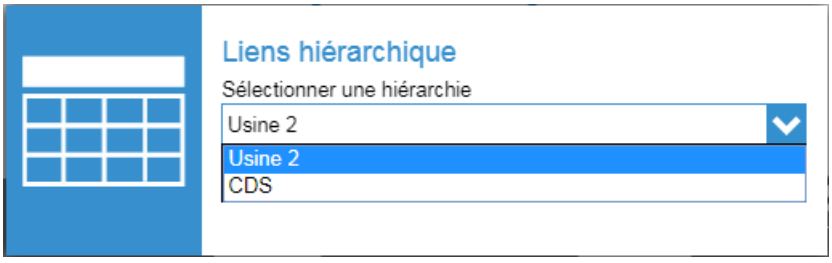
The Nodes name can be customised by clicking on the Node.

Links can be created between the nodes and the loads. They must be created in the direction of the flow, using the mouse to draw a line from the handle under the node or the load to another node or load. A triangle appears on the metering point, indicating the direction of energy flow.

Creating a link from a load (CIL Main) to a node (My hierarchy) automatically generates an Unmeasured Point which automatically calculates the delta between the load associated with the Node and all the loads attached to this Node.



By drag and drop a "Hierarchy" brick, the administrator can create "Father/Son" links between the current hierarchy (Father) and the pre-existing hierarchies (Son).



Once the hierarchy has been created, the distribution of consumptions per load and per use can be viewed in the "Consumptions" function.

8.6. Photoview

The Photoview function customises data on a background of customer images (Photo or Plan of the building, Electrical diagram, Plan etc.).

All data collected can be displayed in value table form, positioned on the image selected by the administrator.

When configured, the Photoview pages can be accessed by any WEBVIEW-L user.

8.6.1. Construction rules for a Photoview page

The Photoview can integrate the following elements:

- Measure: Table grouping together the values that the administrator wants to show on the Photoview page
- Text: Text zone for a comment, title or any indication the administrator considers useful
- Devices: Viewing images of SOCOMEC devices on the Photoview page and direct access via a hypertext link to the device monitoring pages (Monitor function)
- Link: Creation of links between the Photoview pages created. For example, a multi-levels hierarchy of Photoview pages can be created: Campus - Buildings - Floors - Wings

The rules for the construction of Photoview Pages are as follows:

- A Photoview page can contain all collected values, regardless of associated fluids and uses
- 21 Photoview pages can be created
- The Photoview pages can be interconnected via hypertext links

1. *Link*
2. *Text*
3. *Devices*
4. *Measure*

1. Creating a Photoview page.

To create a Photoview page, the administrator enters a name for the page, selects a symbol and opens the window to access the background image selection.

2. Selecting the image

The administrator can browse the files on their PC to select the images of their choice.

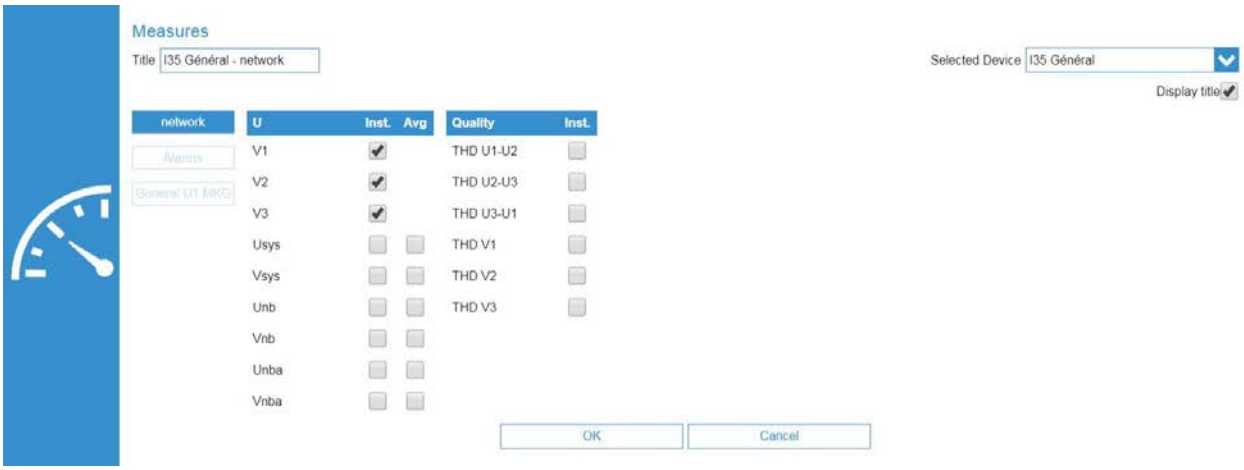
3. Constructing the Photoview page

To construct the Photoview page, the administrator can use various objects (Measure, Text, Devices and Link) in the "Toolbox" menu on the left. The administrator can simply "drag and drop", the objects onto the Photoview page.

- Measure

When a "Measure" object is dropped onto the image, the window below is displayed. The administrator can

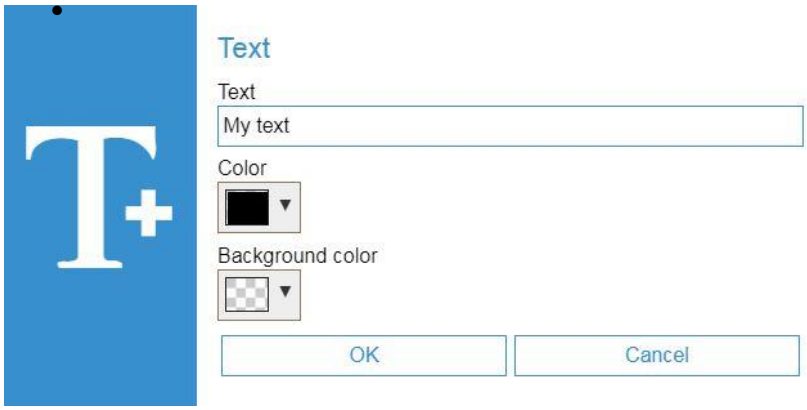
  - Select the device
  - Check the parameters to be displayed
  - Give a title to the value table



- Text

When a "Text" object is dropped onto the image, the window below is displayed. Administrator can

  - Enter the text to be displayed
  - Select the colour of the text and background



Devices

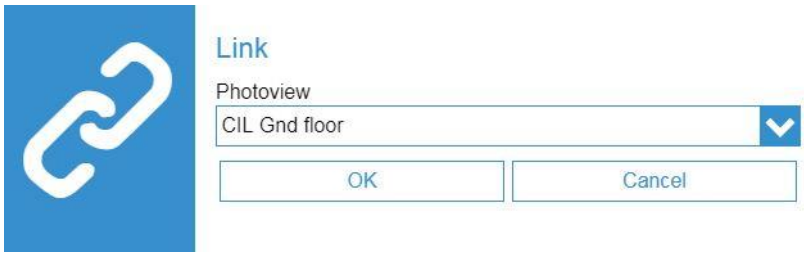
When a "Devices" object is dropped onto the image, the window below is displayed. The administrator can

- Add a device ("Add per device") or all the devices in a location ("Add per location")
- Select the display mode: the symbol of the selected device or simply a zone which can be clicked, adjusted and positioned on any part of the image

All the clickable zones and images have a hypertext link to the monitoring page of the device selected (Monitor function).

- Link

When a "Link" object is dropped onto the image, the window below is displayed The administrator can create a link to another existing Photoview page.



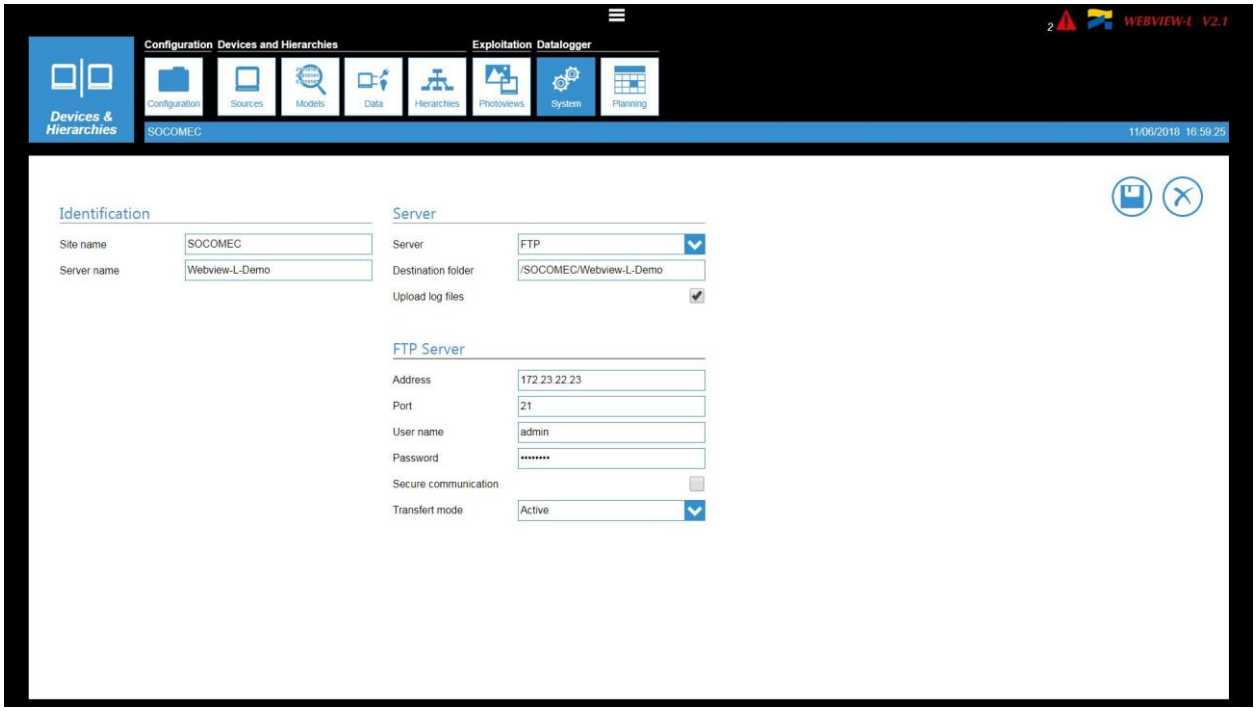
8.7. Datalogger

The purpose of the Datalogger is to collect, store and send the data to a third party server.

There are two parts to Datalogger configuration:

- “System” configuration: general information (identification, remote server configuration)
- "Planning" configuration: the type of aggregation and the frequency of sending per category of data

8.7.1. "System" tab



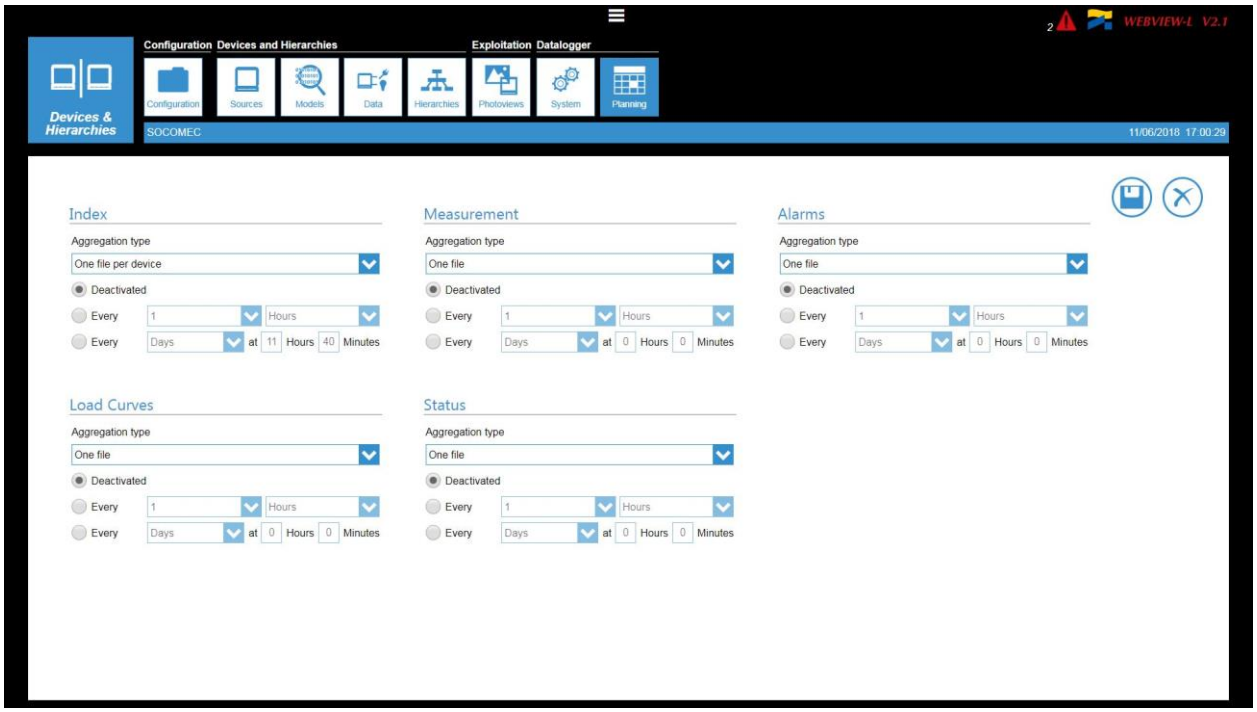
The administrator can configure the following in the "System" tab:

- In the "Identification" section
  - Name of the site: This setting is essential to connect DATALOG H80/H81 to a physical place in the project architecture
  - Name of the Server: Unique identification of DATALOG H80/H81

- In the "Server" section
  - Server: To send data files to a remote server, the administrator can select an HTTP server or an FTP server
  - Destination directory: Specify the folder on the remote server for receiving files
  - Downloading log files: Check whether DATALOG H80/H81 also has to transfer the log file to the remote server

- In the "FTP Server" or "HTTP Server" section
    - Address: Specify the IP address of the remote server
    - Port: Specify the software port (usually: 80 for HTTP and 20 or 21 for FTP)
    - User name: Enter the login to access the remote server
    - Password: Enter the password to access the remote server
    - Secure communication: Activate a secure session between DATALOG H80/H81 and the remote server
    - Transfer mode (for an FTP server only): Choose between active transfer mode or passive depending on whether it is DATALOG H80/H81 that establishes the TCP connection (passive mode) or the remote server (active mode).
    - Authentication mode (for an HTTP server only): Choose between the “Basic” mode (standard authentication method) or the "NTLM" mode (NT LAN manager: the protocol for Microsoft systems)

8.7.2. "Planning" tab



DATALOG H80/H81 publishes data files for each type of selected variable (Index, Measurement, Alarms, Load Curves, Status)

For each type of variable, the administrator defines:

- The type of aggregation: a single file for all devices or a file for each device
- The frequency of sending files: every X minutes/hours or on a specific day and time of the day/week

9. Appendix

9.1. Annex 1: Example of the data file published to the remote server

```
Data Type,"TimeZone","Datation","Transfert Cycle (sec)","Polling Time","Version","Site Id","Gateway Id"
Measure,"Europe/Paris","Local","60","N/A","1.0","Datalogger","TEST_711"

Index Key,"Key","Type","Name","Fluid","Use","Coeff","Unit","Path","Device Id","Index","Data Id"
0,"Datalogger|TEST_711|17|1|ANA|10002|0","ANA","I43_5 - Gateway - 172.23.19.23 - Current L3","None","None",1,"A"," / ","17","1","10002"
1,"Datalogger|TEST_711|17|1|ANA|10001|0","ANA","I43_5 - Gateway - 172.23.19.23 - Current L2","None","None",1,"A"," / ","17","1","10001"
2,"Datalogger|TEST_711|17|1|ANA|10000|0","ANA","I43_5 - Gateway - 172.23.19.23 - Current L1","None","None",1,"A"," / ","17","1","10000"
3,"Datalogger|TEST_711|17|1|ANA|110002|0","ANA","I43_5 - Gateway - 172.23.19.23 - Voltage L3","None","None",1,"V"," / ","17","1","110002"
4,"Datalogger|TEST_711|17|1|ANA|110001|0","ANA","I43_5 - Gateway - 172.23.19.23 - Voltage L2","None","None",1,"V"," / ","17","1","110001"
5,"Datalogger|TEST_711|17|1|ANA|110000|0","ANA","I43_5 - Gateway - 172.23.19.23 - Voltage L1","None","None",1,"V"," / ","17","1","110000"
6,"Datalogger|TEST_711|17|1|ANA|40000|0","ANA","I43_5 - Gateway - 172.23.19.23 - Frequency","None","None",1,"Hz"," / ","17","1","40000"
7,"Datalogger|TEST_711|17|1|ANA|80018|0","ANA","I43_5 - Gateway - 172.23.19.23 - Apparent power phase 3","None","None",1,"kVA"," / ","17","1","80018"
8,"Datalogger|TEST_711|17|1|ANA|80017|0","ANA","I43_5 - Gateway - 172.23.19.23 - Apparent power phase 2","None","None",1,"kVA"," / ","17","1","80017"
9,"Datalogger|TEST_711|17|1|ANA|80016|0","ANA","I43_5 - Gateway - 172.23.19.23 - Apparent power phase 1","None","None",1,"kVA"," / ","17","1","80016"
10,"Datalogger|TEST_711|17|1|ANA|80006|0","ANA","I43_5 - Gateway - 172.23.19.23 - Reactive power phase 3","None","None",1,"kvar"," / ","17","1","80006"
11,"Datalogger|TEST_711|17|1|ANA|80005|0","ANA","I43_5 - Gateway - 172.23.19.23 - Reactive power phase 2","None","None",1,"kvar"," / ","17","1","80005"
12,"Datalogger|TEST_711|17|1|ANA|80004|0","ANA","I43_5 - Gateway - 172.23.19.23 - Reactive power phase 1","None","None",1,"kvar"," / ","17","1","80004"
13,"Datalogger|TEST_711|17|1|ANA|80002|0","ANA","I43_5 - Gateway - 172.23.19.23 - Active power L3","None","None",1,"kW"," / ","17","1","80002"
14,"Datalogger|TEST_711|17|1|ANA|80001|0","ANA","I43_5 - Gateway - 172.23.19.23 - Active power L2","None","None",1,"kW"," / ","17","1","80001"
15,"Datalogger|TEST_711|17|1|ANA|80000|0","ANA","I43_5 - Gateway - 172.23.19.23 - Active power L1","None","None",1,"kW"," / ","17","1","80000"
16,"Datalogger|TEST_711|17|1|ANA|80019|0","ANA","I43_5 - Gateway - 172.23.19.23 - Apparent power sum","None","None",1,"kVA"," / ","17","1","80019"
17,"Datalogger|TEST_711|17|1|ANA|80007|0","ANA","I43_5 - Gateway - 172.23.19.23 - Total reactive power","None","None",1,"kvar"," / ","17","1","80007"
18,"Datalogger|TEST_711|17|1|ANA|80003|0","ANA","I43_5 - Gateway - 172.23.19.23 - Active power sum","None","None",1,"kW"," / ","17","1","80003"
19,"Datalogger|TEST_711|17|1|ANA|75002|0","ANA","I43_5 - Gateway - 172.23.19.23 - Power factor Phase 3","None","None",1,"NONE"," / ","17","1","75002"
20,"Datalogger|TEST_711|17|1|ANA|75001|0","ANA","I43_5 - Gateway - 172.23.19.23 - Power factor Phase 2","None","None",1,"NONE"," / ","17","1","75001"
21,"Datalogger|TEST_711|17|1|ANA|75000|0","ANA","I43_5 - Gateway - 172.23.19.23 - Power factor Phase 1","None","None",1,"NONE"," / ","17","1","75000"
22,"Datalogger|TEST_711|17|1|ANA|75003|0","ANA","I43_5 - Gateway - 172.23.19.23 - Sum of power factor","None","None",1,"NONE"," / ","17","1","75003"
23,"Datalogger|TEST_711|17|1|ANA|100009|0","ANA","I43_5 - Gateway - 172.23.19.23 - THD IN","None","None",1,"%"," / ","17","1","100009"
24,"Datalogger|TEST_711|17|1|ANA|100008|0","ANA","I43_5 - Gateway - 172.23.19.23 - THD I3","None","None",1,"%"," / ","17","1","100008"
25,"Datalogger|TEST_711|17|1|ANA|100007|0","ANA","I43_5 - Gateway - 172.23.19.23 - THD I2","None","None",1,"%"," / ","17","1","100007"
26,"Datalogger|TEST_711|17|1|ANA|100006|0","ANA","I43_5 - Gateway - 172.23.19.23 - THD I1","None","None",1,"%"," / ","17","1","100006"
27,"Datalogger|TEST_711|18|1|ANA|10003|0","ANA","I33_7 - Gateway - 172.23.19.23 - Neutral Current","None","None",1,"A"," / ","18","1","10003"
28,"Datalogger|TEST_711|18|1|ANA|10002|0","ANA","I33_7 - Gateway - 172.23.19.23 - Current L3","None","None",1,"A"," / ","18","1","10002"
29,"Datalogger|TEST_711|18|1|ANA|10001|0","ANA","I33_7 - Gateway - 172.23.19.23 - Current L2","None","None",1,"A"," / ","18","1","10001"
30,"Datalogger|TEST_711|18|1|ANA|10000|0","ANA","I33_7 - Gateway - 172.23.19.23 - Current L1","None","None",1,"A"," / ","18","1","10000"
31,"Datalogger|TEST_711|18|1|ANA|110007|0","ANA","I33_7 - Gateway - 172.23.19.23 - Voltage U31","None","None",1,"V"," / ","18","1","110007"
32,"Datalogger|TEST_711|18|1|ANA|110006|0","ANA","I33_7 - Gateway - 172.23.19.23 - Voltage U23","None","None",1,"V"," / ","18","1","110006"
33,"Datalogger|TEST_711|18|1|ANA|110005|0","ANA","I33_7 - Gateway - 172.23.19.23 - Voltage U12","None","None",1,"V"," / ","18","1","110005"
34,"Datalogger|TEST_711|18|1|ANA|110002|0","ANA","I33_7 - Gateway - 172.23.19.23 - Voltage L3","None","None",1,"V"," / ","18","1","110002"
35,"Datalogger|TEST_711|18|1|ANA|110001|0","ANA","I33_7 - Gateway - 172.23.19.23 - Voltage L2","None","None",1,"V"," / ","18","1","110001"
36,"Datalogger|TEST_711|18|1|ANA|110000|0","ANA","I33_7 - Gateway - 172.23.19.23 - Voltage L1","None","None",1,"V"," / ","18","1","110000"
37,"Datalogger|TEST_711|18|1|ANA|40000|0","ANA","I33_7 - Gateway - 172.23.19.23 - Frequency","None","None",1,"Hz"," / ","18","1","40000"
38,"Datalogger|TEST_711|18|1|ANA|80018|0","ANA","I33_7 - Gateway - 172.23.19.23 - Apparent power phase 3","None","None",1,"kVA"," / ","18","1","80018"
39,"Datalogger|TEST_711|18|1|ANA|80017|0","ANA","I33_7 - Gateway - 172.23.19.23 - Apparent power phase 2","None","None",1,"kVA"," / ","18","1","80017"
40,"Datalogger|TEST_711|18|1|ANA|80016|0","ANA","I33_7 - Gateway - 172.23.19.23 - Apparent power phase 1","None","None",1,"kVA"," / ","18","1","80016"
41,"Datalogger|TEST_711|18|1|ANA|80006|0","ANA","I33_7 - Gateway - 172.23.19.23 - Reactive power phase 3","None","None",1,"kvar"," / ","18","1","80006"
42,"Datalogger|TEST_711|18|1|ANA|80005|0","ANA","I33_7 - Gateway - 172.23.19.23 - Reactive power phase 2","None","None",1,"kvar"," / ","18","1","80005"
43,"Datalogger|TEST_711|18|1|ANA|80004|0","ANA","I33_7 - Gateway - 172.23.19.23 - Reactive power phase 1","None","None",1,"kvar"," / ","18","1","80004"
44,"Datalogger|TEST_711|18|1|ANA|80002|0","ANA","I33_7 - Gateway - 172.23.19.23 - Active power L3","None","None",1,"kW"," / ","18","1","80002"
45,"Datalogger|TEST_711|18|1|ANA|80001|0","ANA","I33_7 - Gateway - 172.23.19.23 - Active power L2","None","None",1,"kW"," / ","18","1","80001"
46,"Datalogger|TEST_711|18|1|ANA|80000|0","ANA","I33_7 - Gateway - 172.23.19.23 - Active power L1","None","None",1,"kW"," / ","18","1","80000"
47,"Datalogger|TEST_711|18|1|ANA|80019|0","ANA","I33_7 - Gateway - 172.23.19.23 - Apparent power sum","None","None",1,"kVA"," / ","18","1","80019"
48,"Datalogger|TEST_711|18|1|ANA|80007|0","ANA","I33_7 - Gateway - 172.23.19.23 - Total reactive power","None","None",1,"kvar"," / ","18","1","80007"
49,"Datalogger|TEST_711|18|1|ANA|80003|0","ANA","I33_7 - Gateway - 172.23.19.23 - Active power sum","None","None",1,"kW"," / ","18","1","80003"
50,"Datalogger|TEST_711|18|1|ANA|75002|0","ANA","I33_7 - Gateway - 172.23.19.23 - Power factor Phase 3","None","None",1,"NONE"," / ","18","1","75002"
```

9.2. Appendix 2: list of all standard data managed in WEBVIEW-L

Name	Groupe	Unit
IAnalogicInputMeters1	input	-
IAnalogicInputMeters10	input	-
IAnalogicInputMeters2	input	-
IAnalogicInputMeters3	input	-
IAnalogicInputMeters4	input	-
IAnalogicInputMeters5	input	-
IAnalogicInputMeters6	input	-
IAnalogicInputMeters7	input	-
IAnalogicInputMeters8	input	-
IAnalogicInputMeters9	input	-
IDCIacInst	current	A
IDCIdcInst	current	A
IDCIrmsInst	current	A
IEaNInst	energy	Wh
IEaNPartialInst	energy	Wh
IEaPInst	energy	Wh
IEaPPartialInst	energy	Wh
IErNInst	energy	varh
IErNPartialInst	energy	varh
IErPInst	energy	varh
IErPPartialInst	energy	varh
IEsInst	energy	VAh
IEsPartialInst	energy	VAh
IFreqInst	frequency	Hz
IFreqSource1Inst	frequency	Hz
IFreqSource2Inst	frequency	Hz
IHarmonicsTHDI1Inst	thd	%
IHarmonicsTHDI2Inst	thd	%
IHarmonicsTHDI3Inst	thd	%
IHarmonicsTHDINInst	thd	%
IHarmonicsTHDISysInst	thd	%
IHarmonicsTHDU12Inst	thd	%
IHarmonicsTHDU23Inst	thd	%
IHarmonicsTHDU31Inst	thd	%
IHarmonicsTHDUSysInst	thd	%
IHarmonicsTHDV1Inst	thd	%
IHarmonicsTHDV2Inst	thd	%
IHarmonicsTHDV3Inst	thd	%
IHarmonicsTHDVSysInst	thd	%
II1Inst	current	A
II2Inst	current	A
II3Inst	current	A
IIhomInst	current	A
IIinvInst	current	A
IImpulseMeters	energy	-

IInbaInst	current	%
IInInst	current	A
IInputMeterValuesHistory	history	-
IInputState1	states	-
IInputState10	states	-
IInputState2	states	-
IInputState3	states	-
IInputState4	states	-
IInputState5	states	-
IInputState6	states	-
IInputState7	states	-
IInputState8	states	-
IInputState9	states	-
IInstExternalTemperature1	temperature	°C
IInstExternalTemperature2	temperature	°C
IInstExternalTemperature3	temperature	°C
IInstExternalTemperature4	temperature	°C
IInstExternalTemperature5	temperature	°C
IInstExternalTemperature6	temperature	°C
IInstExternalTemperature7	temperature	°C
IInstExternalTemperature8	temperature	°C
IInstInternalTemperature	temperature	°C
IIPEInst	current	A
IISysInst	current	A
ILoadDCVacInst	voltage	V
ILoadDCVdcInst	voltage	V
ILoadDCVrmsInst	voltage	V
INetworkDCVacInst	voltage	V
INetworkDCVdcInst	voltage	V
INetworkDCVrmsInst	voltage	V
INetworkFreqInst	frequency	Hz
INetworkTHDU12Inst	thd	%
INetworkTHDU23Inst	thd	%
INetworkTHDU31Inst	thd	%
INetworkTHDUSysInst	thd	%
INetworkTHDV1Inst	thd	%
INetworkTHDV2Inst	thd	%
INetworkTHDV3Inst	thd	%
INetworkTHDVSysInst	thd	%
INetworkU12Inst	voltage	V
INetworkU23Inst	voltage	V
INetworkU31Inst	voltage	V
INetworkUdirInst	voltage	V
INetworkUinvInst	voltage	V
INetworkUnbaInst	voltage	%
INetworkV1Inst	voltage	V
INetworkV2Inst	voltage	V
INetworkV3Inst	voltage	V
INetworkVdirInst	voltage	V

INetworkVhomInst	voltage	V
INetworkVinvInst	voltage	V
INetworkVnbaInst	voltage	%
INetworkVnInst	voltage	V
IP1Inst	power	W
IP2Inst	power	W
IP3Inst	power	W
IpF1Inst	pf	-
IpF2Inst	pf	-
IpF3Inst	pf	-
IpFSumInst	pf	-
IPNegativeHistory	history	W
IPPositiveHistory	history	W
IPredActivePower	power	W
IPredActivePowerNeg	power	W
IPredApparentPower	power	VA
IPredReactivePower	power	var
IPredReactivePowerNeg	power	var
IDeviceAlarm1	alarm	-
IDeviceAlarm2	alarm	-
IDeviceAlarm3	alarm	-
IDeviceAlarm4	alarm	-
IDeviceAlarm5	alarm	-
IDeviceAlarm6	alarm	-
IDeviceAlarm7	alarm	-
IDeviceAlarm8	alarm	-
IPSumInst	power	W
IQ1Inst	power	var
IQ2Inst	power	var
IQ3Inst	power	var
IQNegativeHistory	history	var
IQPositiveHistory	history	var
IQSumInst	power	var
IS1Inst	power	VA
IS2Inst	power	VA
IS3Inst	power	VA
ISHistory	history	VA
ISSumInst	power	VA
IU12Inst	voltage	V
IU12Source1Inst	voltage	V
IU12Source2Inst	voltage	V
IU23Inst	voltage	V
IU23Source1Inst	voltage	V
IU23Source2Inst	voltage	V
IU31Inst	voltage	V
IU31Source1Inst	voltage	V
IU31Source2Inst	voltage	V
IUdirInst	voltage	V
IUinvInst	voltage	V
IUnbaInst	voltage	%

IUSysInst	voltage	V
IV1Inst	voltage	V
IV1Source1Inst	voltage	V
IV1Source2Inst	voltage	V
IV2Inst	voltage	V
IV2Source1Inst	voltage	V
IV2Source2Inst	voltage	V
IV3Inst	voltage	V
IV3Source1Inst	voltage	V
IV3Source2Inst	voltage	V
IVdirInst	voltage	V
IVhomInst	voltage	V
IVinvInst	voltage	V
IVnbaInst	voltage	%
IVnInst	voltage	V
IVSysInst	voltage	V

9.3. Appendix 3: Security recommendations

DATALOG H80/H81, as any device connected to the client Ethernet network, must be protected against any risk of cyber attack or data loss/destruction. This protection is the client's responsibility.
Therefore, the recommendations below must be in line with the IT system security policy, implemented by the client.

- ***Awareness of the security policy***: DATALOG H80 WEBVIEW-L users and administrators are aware of and trained in good IT security practice (information and compliance with corporate security policy, authentication procedure management and password safety, online session management, risks of fishing…)

- ***Network security***: The IT system architecture must be able to safeguard resources, by segmenting the network according to their degree of sensitivity and using a variety of protective devices (firewall, demilitarised zone, VLAN, network anti-virus etc.).

- ***Device security*****:** Device security depends on its network environment, but also user behaviour. In terms of the environment, elementary protective measures (filtering authorised stations by MAC address, opening service ports, selecting authorised applications etc.) are highly recommended. Greater precaution is required on managing removable media (external hard drive, USB flash drive, wireless communication provision etc.). Finally, in terms of a server like the DATALOG H80/H81, it should be protected by controlling and limiting physical access to the rooms and cabinets hosting the device.

- ***Data security:*** Data security covers several aspects, in particular the confidentiality, integrity, authenticity and availability of data. Special care is required with data security and archiving procedures on backup devices both inside and outside the company.

- ***Access and authentication management:*** Managing access to resources and data is a crucial element of the IT system's security policy. Each user requires an account and access rights corresponding to their profile. Access to the IT system's resources is controlled by a user authentication process, based on a minimum of a high-security username and password.
The password management procedure, specifying the systematic modification of default passwords and their validity period, is included in the IT system's security policy.

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