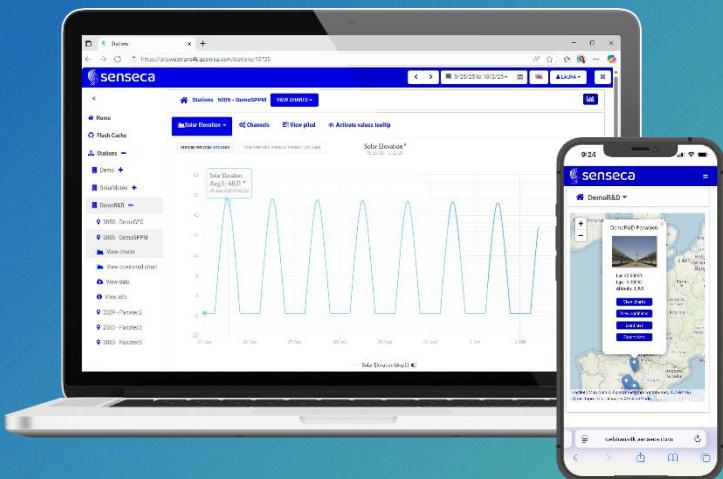


OPERATION MANUAL

Webtrans 4K

Web Platform



EN
V1.0

 **senseca**

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1 Introduction

Webtrans 4K is a web-based platform developed entirely by Senseca for managing, viewing and monitoring data collected from automatic remote stations (METEODATA-2000/3000/4000 series).

Webtrans 4K is part of the GEODATAVIEW software suite and is available in two formats: as a cloud service (Webtrans 4K CLOUD Service) and as a self-hosted solution (Webtrans 4K Distributable Web Server).

	GEO-Data-link App	Webtrans 4K Cloud Service	Data Contract (SIM Senseca)	Teletrans-W4K Software	Distributable Web Server Webtrans 4K
GEO-DataView BASIC	✓		Optional		
GEO-DataView ADVANCED	✓	✓			
GEO-DataView PREMIUM	✓	✓	✓		
GEO-DataView PRO	✓		Optional	✓	
GEO-DataView ENTERPRISE	✓		Optional	✓	✓

The **Webtrans 4K Cloud** service is a cloud-based platform hosted and managed by Senseca, operating on a cluster of dedicated servers. Senseca handles the registration of new stations, user access permissions, routine maintenance, etc. Customers subscribe to a renewable service plan granting them web-based access to the data collected by their remote stations via:

<https://webtrans4k.senseca.com>

Alternatively, the **Webtrans 4K Distributable** Web Server offers a self-hosted solution for customers who prefer to install and manage the platform on their own private servers.

The purpose of this document is to explain how to use and operate Webtrans 4K from the perspective of the end user. It focuses on accessing the platform through a web browser from any device in order to consult and download data collected by remote stations.

Compatibility		
Operating Systems	<ul style="list-style-type: none"> Microsoft Windows Mac OS X Linux 	<ul style="list-style-type: none"> iOS Android
Browsers	<ul style="list-style-type: none"> Chrome Firefox 	<ul style="list-style-type: none"> IE11 Safari
Devices / Terminals	<ul style="list-style-type: none"> Desktop Laptop 	<ul style="list-style-type: none"> Tablet Smartphone.

2 Access to Webtrans-4K

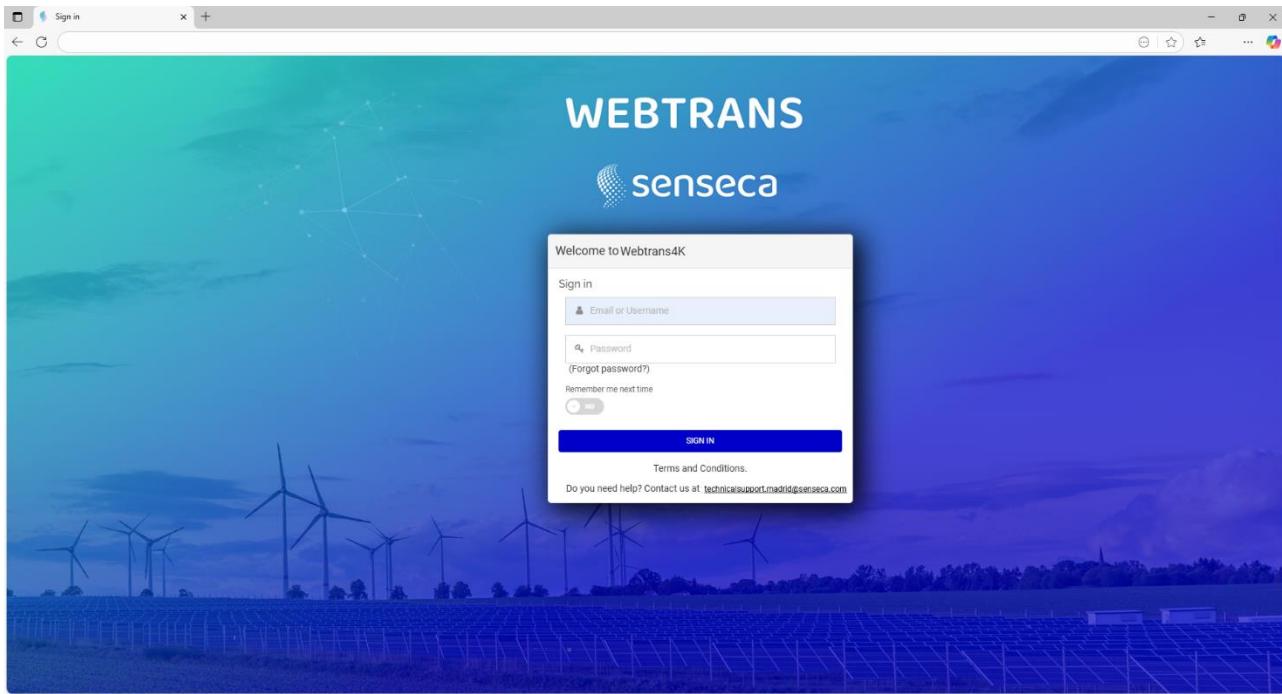


Fig. 2.1: Log in

To access Webtrans 4K, each user must have:

- A URL, domain name or Web address for access
- A user (username or email)
- A password

This information is automatically sent by email once the web administrator registers the user.

Dear User,

Senseca has created an account for you on WEBTRANS4K

(<https://webtrans4k.senseca.com>). Log in with your email address and the automatically generated password: 123456

To modify this password, please use the 'I forgot my password' button on the login page. If you have received this email in error, simply delete it.

To access all available features, the user must open the provided URL in any web browser and log in with their credentials.

If the user forgets their password or wants to update it, they should click on the 'Forgot your password?' link. A password reset email will be sent to their registered address.

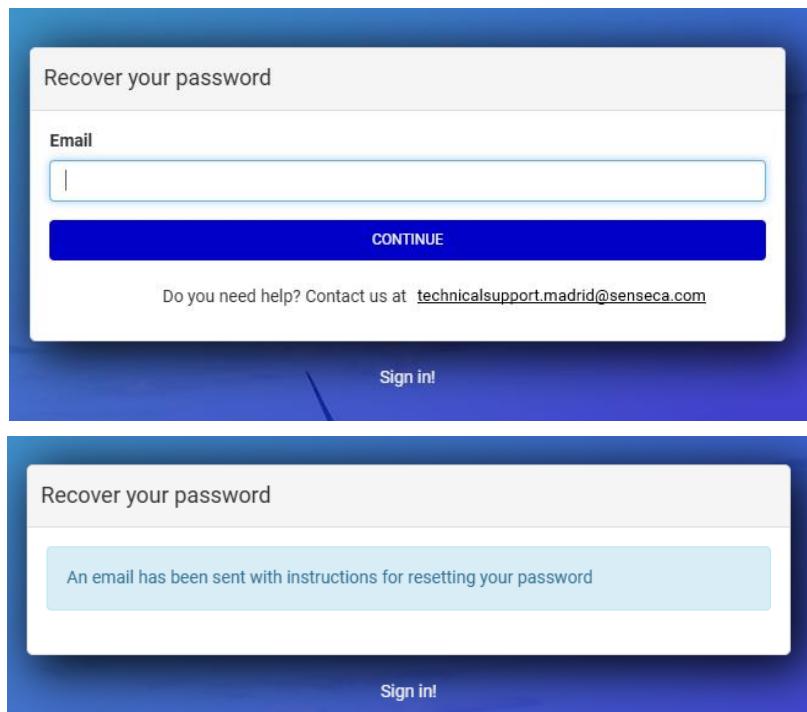


Fig. 2.2: Recover your password

The home page will be displayed after logging in.

! **Attention!**

Webtrans 4K uses role-based access control, where the web administrator assigns specific roles to each user. Each role comes with defined privileges. This document describes all the query options available to users with full access. Some features may be limited depending on the user's assigned role.

3 Home Page

The Webtrans 4K interface is organized into the following main modules:

- Top menu (general settings)
- Left panel (stations and query options)
- Central panel (main information display)
- Right panel (latest data module)

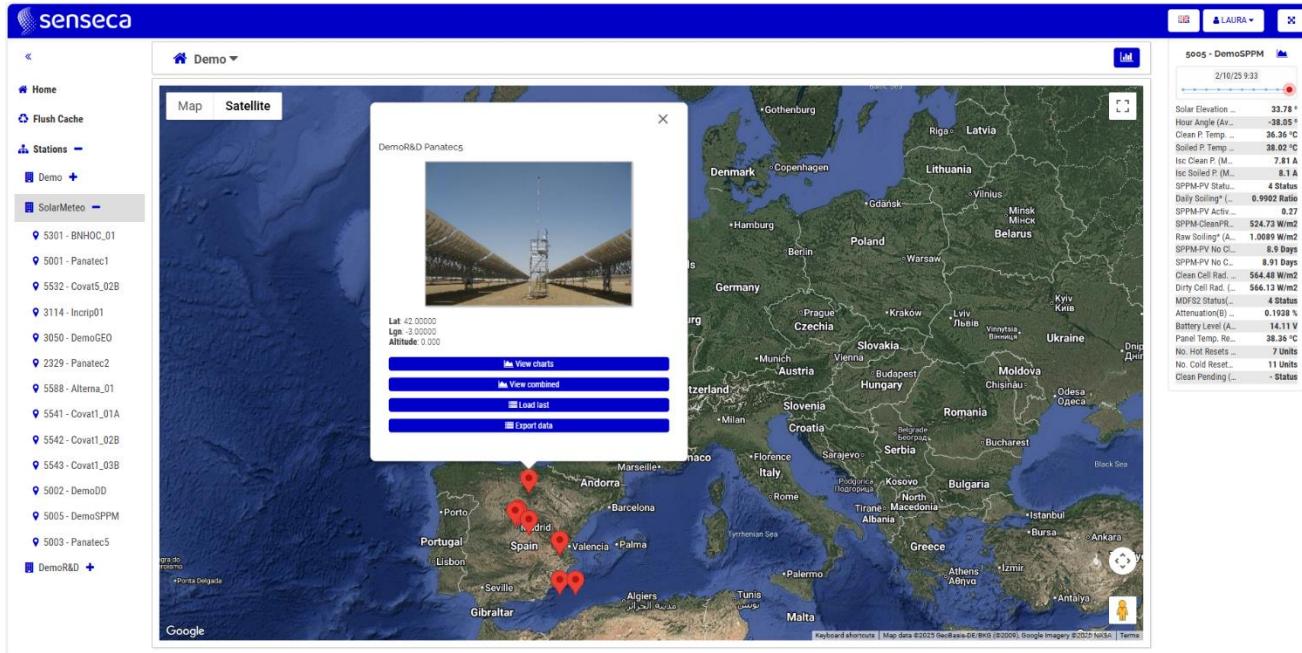


Fig. 3.1: Home page

3.1 Home Page Top menu (general settings)

Language selection.

This button, displayed with a flag icon, allows the user to change the interface language. When a different language is selected, all displayed text is updated accordingly.

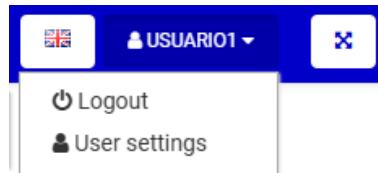
The drop-down menu shows all the languages previously enabled by the web administrator.



Fig. 3.2: Languages

Log out.

This option allows the user to log out of the current Webtrans 4K session.

**Fig. 3.3: Log out****Full-screen mode.**

This button expands Webtrans 4K to populate the entire browser window, hiding the browser's address bar and other interface elements.

**Fig. 3.4: Full screen**

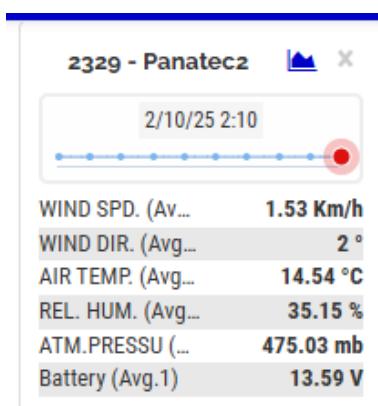
3.2 Home Page Left panel (stations and query options)

Stations menu:

This drop-down menu lists all the stations accessible to the user. Selecting a station redirects to its data screen (see section 4: Main Page: Station Data).

**Fig. 3.5: Stations menu**

3.3 Home Page Right panel (latest data module)

**Fig. 3.6: Latest data**

3.4 Home Page Central panel (main information display)

Geolocated stations on map

A map displaying the geographic location of each station based on the automatically collected coordinates.

The user can interact with the map by zooming, panning or switching between map views (e.g., satellite, relief).

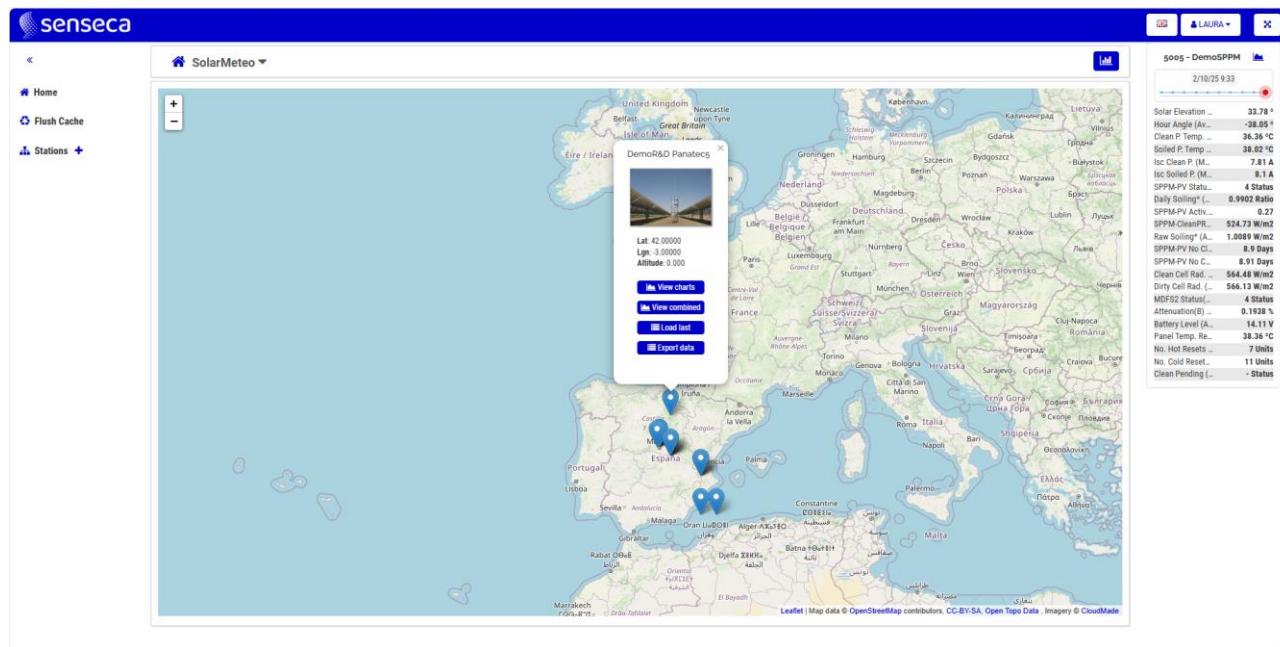


Fig. 3.7: Stations on map

Compatible maps:

Maps Provider	Map Type	API Key Required
Geo-referenced image	Image	No
Bing Maps	Road Aerial	Yes
Google Maps	Road Satellite Hybrid Terrain	Yes
Open Street Maps	Open Street Map	No

Clicking on a station icon opens a window displaying station information along with quick access to the following functions:

- **View charts** - Links to the station's chart display
- **View combined** - Opens the combined data series view.
- **Load last** - Loads the most recent data recorded by the station.
- **Export data** - Opens the data export interface.

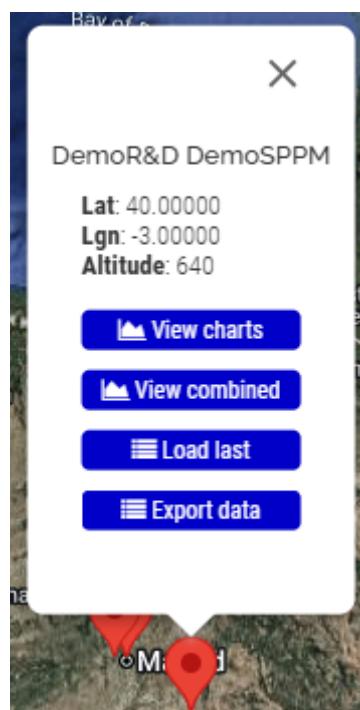


Fig. 3.8: Options from map

4 Main Page: Data from Remote Stations

The main Webtrans 4K screen can be accessed from various buttons available on the home page. This screen allows the user to access the data collected by the stations in graph or table format.

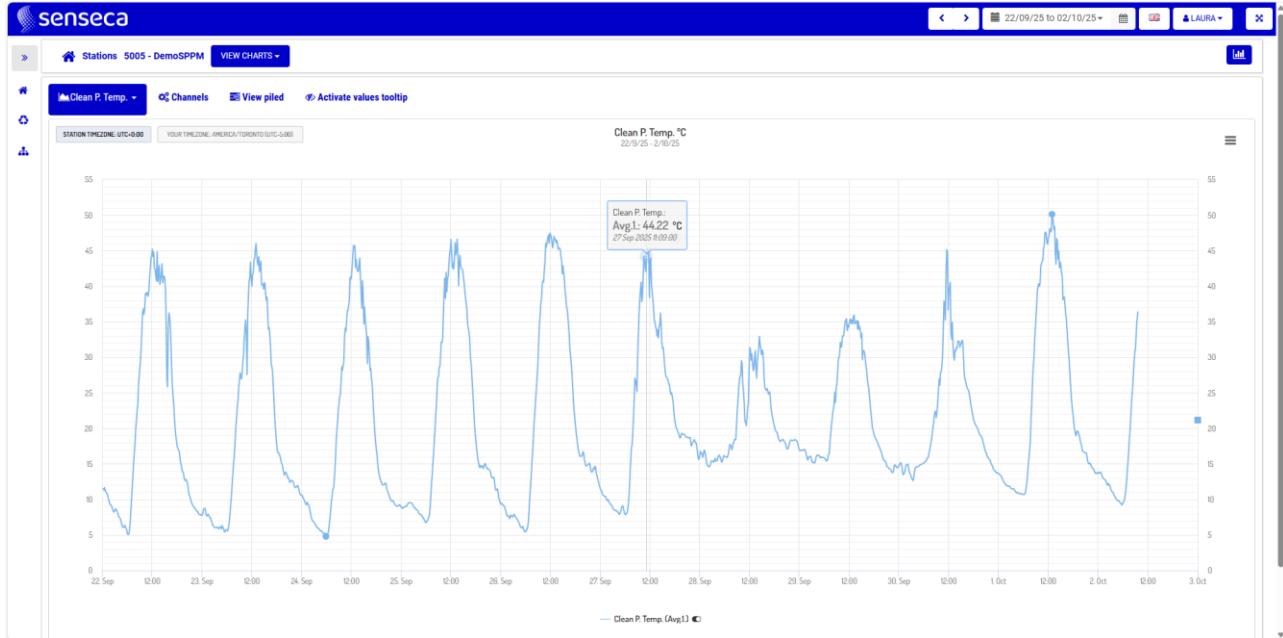


Fig. 4.1: Main page - Data

4.1 Main Page Top Menu: Languages, Dates, User

Date range selection

Use the top menu to select the date range for all displayed data (charts, tables, etc.).

Arrow buttons allow you to shift the date range forwards or backwards by one day.

The calendar button opens a menu with preset options for quick selection, such as: Today, Yesterday, Last 7 Days, etc. If none of the presets match the desired range, click 'Define Range' to set a custom period, then click 'Apply' to update the data view.

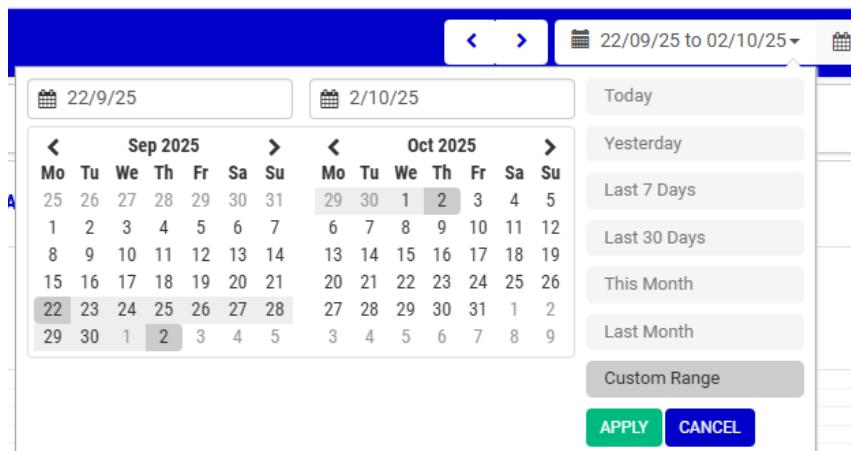


Fig. 4.2: Date selection

The rest of the buttons included in the top menu of the main page refers to functionalities previously described for the home page: Language Selection/Log Out/Full-Screen Mode.

4.2 Main Page Stations And Consultation Menu (Left)

'HOME' button

Returns to the home page with the geolocated station map

'STATIONS' drop-down menu

Displays a list of all stations available to the user.

Upon selecting a station, Webtrans 4K will automatically show its data view options:

- **View charts** – See 4.3.1
- **View combined charts** – See 4.3.2
- **Export data** – See 4.3.3
- **View info** – See 4.3.4
- **Gallery** – See 4.3.5

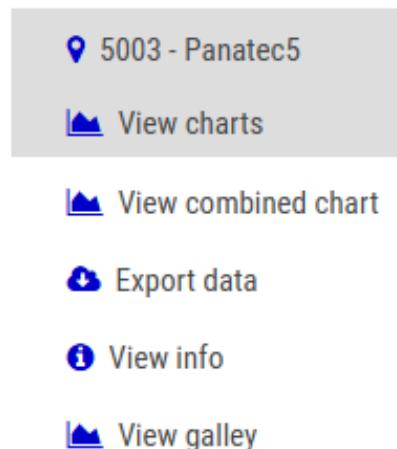


Fig. 4.3: Stations drop-down menu

4.3 Main Page Central Information Module

This Webtrans 4K module displays information collected by stations that users wish to consult, in different formats depending on the display option selected.

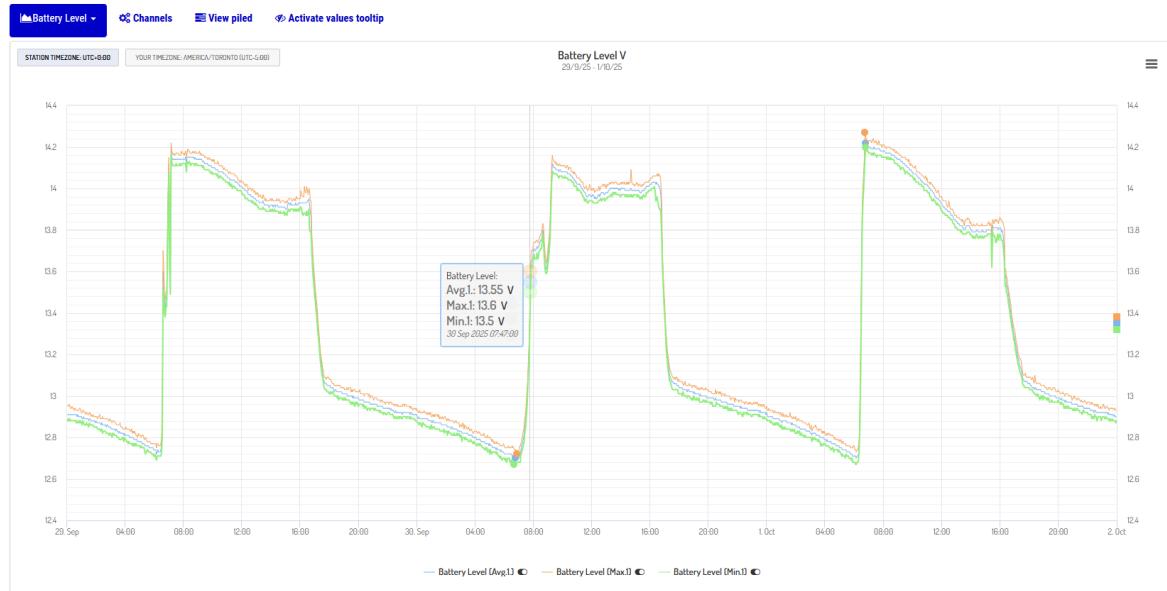


Fig. 4.4: Main page central

4.3.1 View charts

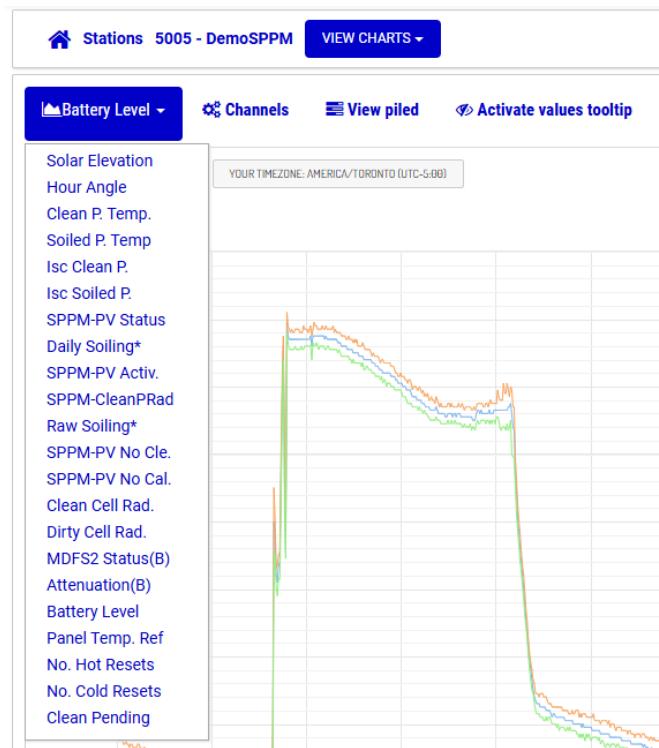
Displays an interactive chart of the selected station's channel(s) over a specified date range.

- For METEODATA-4000, data series are grouped by channel (e.g., Maximum Temperature, Average Temperature, and Minimum Temperature appear in the same graph). For METEODATA-2000/3000, each data series is displayed in an individual graph.
- The top of the graph shows the measured parameter and its unit.
- The legend at the bottom allows users to toggle series visibility.
- An interactive tooltip displays the exact value and timestamp of each data point.
- The graph supports zooming (with mouse or touch gestures). The 'reset zoom' button restores the original view.
- Left-side markers show average values; max and min points are also marked and accessible via tooltip.

**Fig. 4.5: View charts**

From the header of the graphs, the following buttons are available:

Channel Selector - Allows the user to choose which channel(s) to display in the graph.

**Fig. 4.6: Channel selection**

Channel Configuration - Customizes the data presented on the graph

Basic options include:

- Show/hide series.
- Automatic max/min adjustment.

#	NUM CHANNEL	CHANNEL NAME	CHANNEL ALIAS	CHANNEL UNITS	CHANNEL PARAMETER	TYPE	PERIOD 1	PERIOD 2	SAMPLING PERIOD	ORDER	AUTOMATIC MIN/MAX	VISIBLE	ACTIONS
1	1	Avg.1.	Solar Elevation (Avg.1)	°	Solar Elevation	Line chart	1	60	1000	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Avg.1.	Hour Angle (Avg.1)	°	Hour Angle	Line chart	1	60	1000	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	3	Avg.1.	Clean P. Temp. (Avg.1)	°C	Clean P. Temp.	Line chart	1	60	1000	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	4	Avg.1.	Soiled P. Temp (Avg.1)	°C	Soiled P. Temp	Line chart	1	60	1000	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	5	Max.1	Isc Clean P. (Max.1)	A	Isc Clean P.	Line chart	1	60	1000	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	6	Max.1	Isc Soiled P. (Max.1)	A	Isc Soiled P.	Line chart	1	60	1000	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	7	Avg.1.	SPPM-PV Status (Avg.1)	Status	SPPM-PV Status	Line chart	1	60	500	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8		Logic OR.1	SPPM-PV Status (OR.1)	Status	SPPM-PV Status	Line chart	1	60	500		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	8	Avg.1.	Daily Soiling* (Avg.1)	Ratio	Daily Soiling*	Line chart	1	1440	500	8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	9	Avg.1.	SPPM-PV Activ. (Avg.1)		SPPM-PV Activ.	Line chart	1	60	1000	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Fig. 4.7: Basic channel configuration

Advanced options (via icon) include:

- Show/hide individual series.
- Edit series name, alias, and units.
- Change graph type (line or range/bits).
- Set refresh period.
- Define decimal precision.
- Adjust display order.
- Apply linear transformation: $V1 = (V0 \times \text{Factor}) + \text{Constant}$.

Fig. 4.8: Advanced channel configuration

View Piled - Displays multiple series stacked vertically.

After enabling this option, select the series to be stacked from the channel menu.

Activate values tooltip - Enables an interactive tooltip displaying the numerical value of each point in the series.

Once disabled, use the button to enable it again or click on a point on the graph to enable the tooltip for 30 seconds.

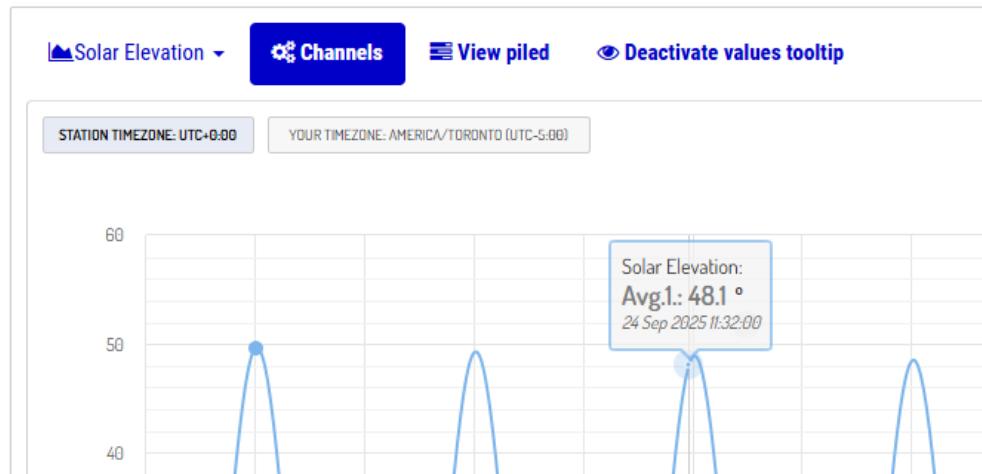


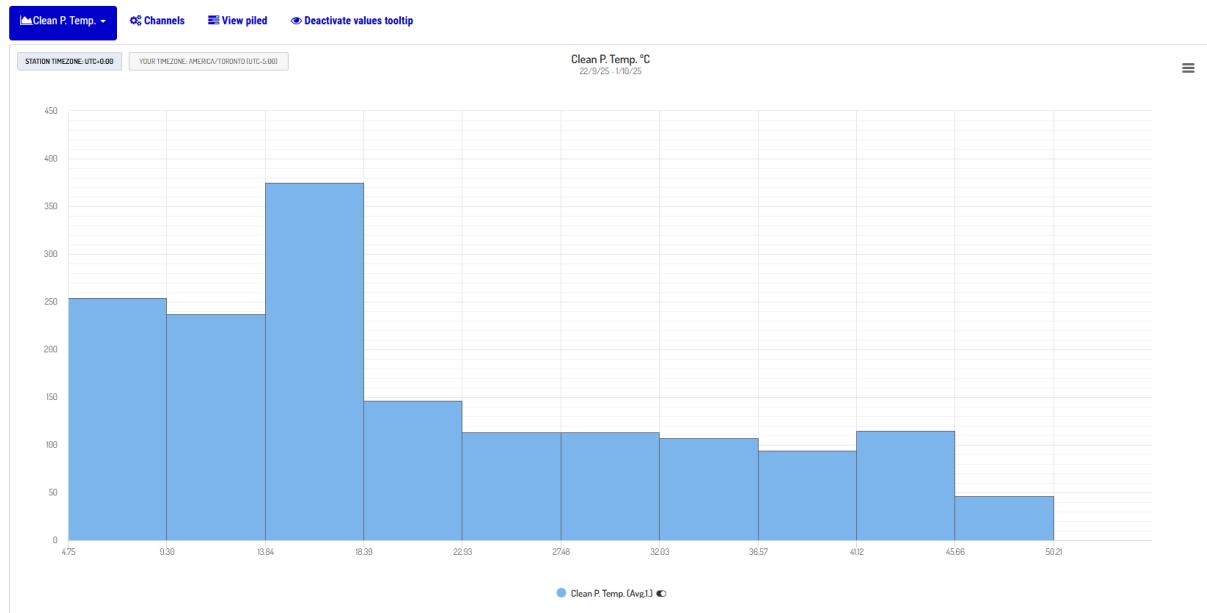
Fig. 4.9: Tooltip

The following options are available from the context menu of the chart:



Fig. 4.10: Options on charts

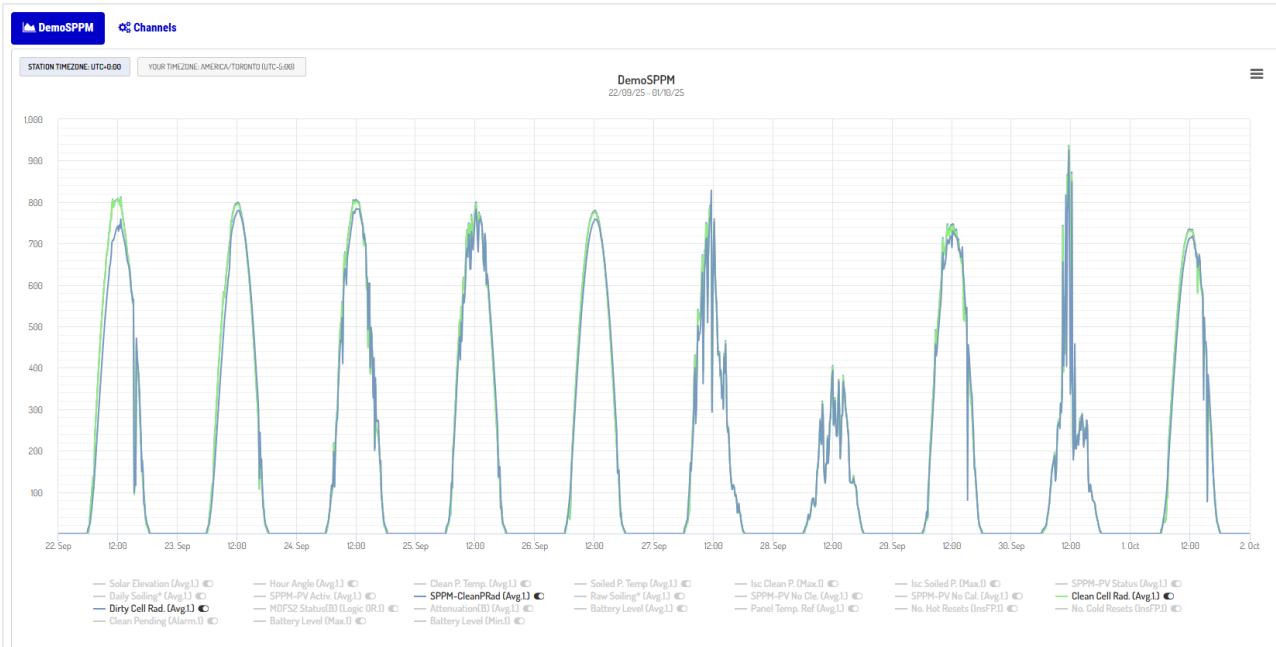
- Auto/Defined Y-Axis - Sets Y-axis automatically based on data or uses the pre-defined min/max.
- Export Chart - Downloads chart in PNG, JPEG, SVG, or PDF format.
- Print Chart - Sends chart to the printer.
- Convert to Histogram

**Fig. 4.11: Histogram**

4.3.2 View combined chart

This feature displays all series from a given station on a single combined chart, allowing users to compare multiple parameters simultaneously.

- All interactive options from View Charts are available here.
- Users can show/hide series via the legend.
- Additional options are accessible via the chart's context menu.

**Fig. 4.12: Combined chart**

4.3.3 Export data

Allows users to view and export the numerical data collected by the station for each channel within the selected date range.

#	Date	Solar Elevation (Avg.1.) °	Hour Angle (Avg.1.) °	Clean P. Temp. (Avg.1.) °C	Soiled P. Temp (Avg.1.) °C	Isc Clean P. (Max.1) A	Isc Soiled P. (Max.1) A	SPPM-PV Status (Avg.1.) Status	SPPM-PV Status (Logic OR.1) Status	Daily Soiling* (Avg.1.) Ratio	SPPM-PV Ac
	22/9/25 to 1/10/2										
1	2025-09-22 00:01:00	-8.964	178.074	11.705	12.706	0.003	0.004	308	308	0.944	0.567
2	2025-09-22 00:02:00	-8.964	178.323	11.704	12.685	0.002	0.004	308	308	0.944	0.567
3	2025-09-22 00:03:00	-8.964	178.574	11.658	12.647	0.003	0.003	308	308	0.944	0.567
4	2025-09-22 00:04:00	-8.964	178.824	11.635	12.63	0.003	0.004	308	308	0.944	0.567
5	2025-09-22 00:05:00	-8.964	179.074	11.595	12.618	0.003	0.004	308	308	0.944	0.567
6	2025-09-22 00:06:00	-8.964	179.324	11.597	12.612	0.003	0.004	308	308	0.944	0.567
7	2025-09-22 00:07:00	-8.964	179.573	11.576	12.582	0.003	0.004	308	308	0.944	0.567
8	2025-09-22 00:08:00	-8.964	179.824	11.527	12.542	0.003	0.004	308	308	0.944	0.567
9	2025-09-22 00:09:00	-8.964	-107.926	11.522	12.536	0.003	0.004	308	308	0.944	0.567
10	2025-09-22 00:10:00	-8.964	-107.974	11.504	12.53	0.003	0.004	308	308	0.944	0.567
11	2025-09-22 00:11:00	-8.964	-107.922	11.491	12.516	0.003	0.004	308	308	0.944	0.567
12	2025-09-22 00:12:00	-8.964	-107.87	11.468	12.476	0.003	0.004	308	308	0.944	0.567
13	2025-09-22 00:13:00	-8.964	-107.825	11.424	12.427	0.003	0.004	308	308	0.944	0.567
14	2025-09-22 00:14:00	-8.964	-107.77	11.379	12.411	0.002	0.004	308	308	0.944	0.567
15	2025-09-22 00:15:00	-8.964	-107.725	11.366	12.417	0.003	0.004	308	308	0.944	0.567
16	2025-09-22 00:16:00	-8.964	-107.67	11.375	12.411	0.003	0.004	308	308	0.944	0.567
17	2025-09-22 00:17:00	-8.964	-107.625	11.344	12.364	0.003	0.004	308	308	0.944	0.567
18	2025-09-22 00:18:00	-8.964	-107.57	11.312	12.356	0.003	0.004	308	308	0.944	0.567
19	2025-09-22 00:19:00	-8.964	-107.525	11.313	12.365	0.003	0.004	308	308	0.944	0.567
20	2025-09-22 00:20:00	-8.964	-107.47	11.325	12.384	0.003	0.004	308	308	0.944	0.567

Fig. 4.13: Export data

- Normal View – Rows represent timestamps; columns represent channel-function series.
- Advanced View – Displays data in database format.
- Export Formats: CSV, Txt, Excel

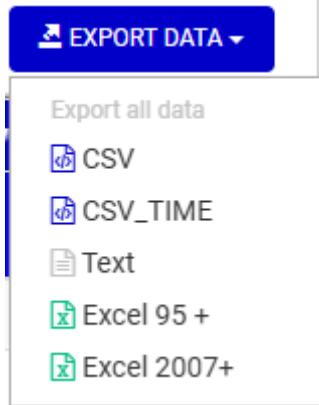


Fig. 4.14: Export data formats

After selecting the desired format, Webtrans 4K starts a background task to prepare the file. Once complete, the user receives an email with a download link, preventing browser slowdowns during large exports.

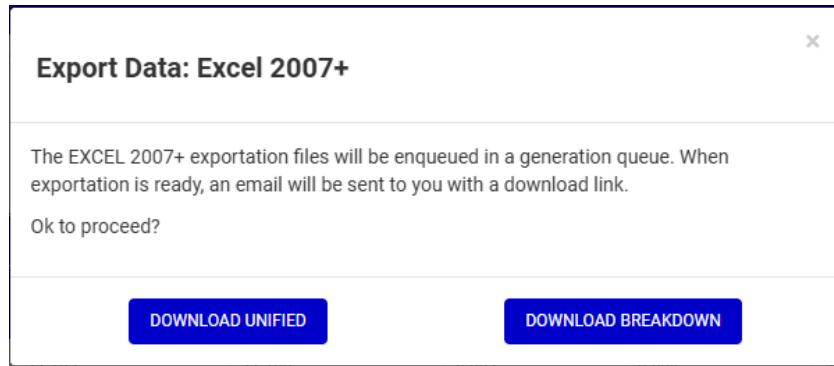


Fig. 4.15: Export message

4.3.4 View info

Displays a screen with key station information, including:

- Station ID (serial number)
- Station image (if configured)
- Location (geographic coordinates)
- Channel configuration
- Other relevant information

Name of Station	Panatec5	ID number of the station	5003
Database	BBDD_TestsLeura	Station Application	General Purpose
Station Type	MeteoData 4000	Timezone	UTC+0:00
Station public	No	Station enabled	Yes

Last update at 4 Nov 2025 21:28:00

Fig. 4.16: View info

4.3.5 Gallery

If the remote station includes one or various camera/s, the Web interface displays the captured photos in a gallery.

Clicking this option automatically shows the most recently captured image.

Previous photos are also accessible from the gallery.

4.4 Main Page Latest Data Panel (Right)

Clicking the button in the top-right corner opens the 'Latest Data' panel.

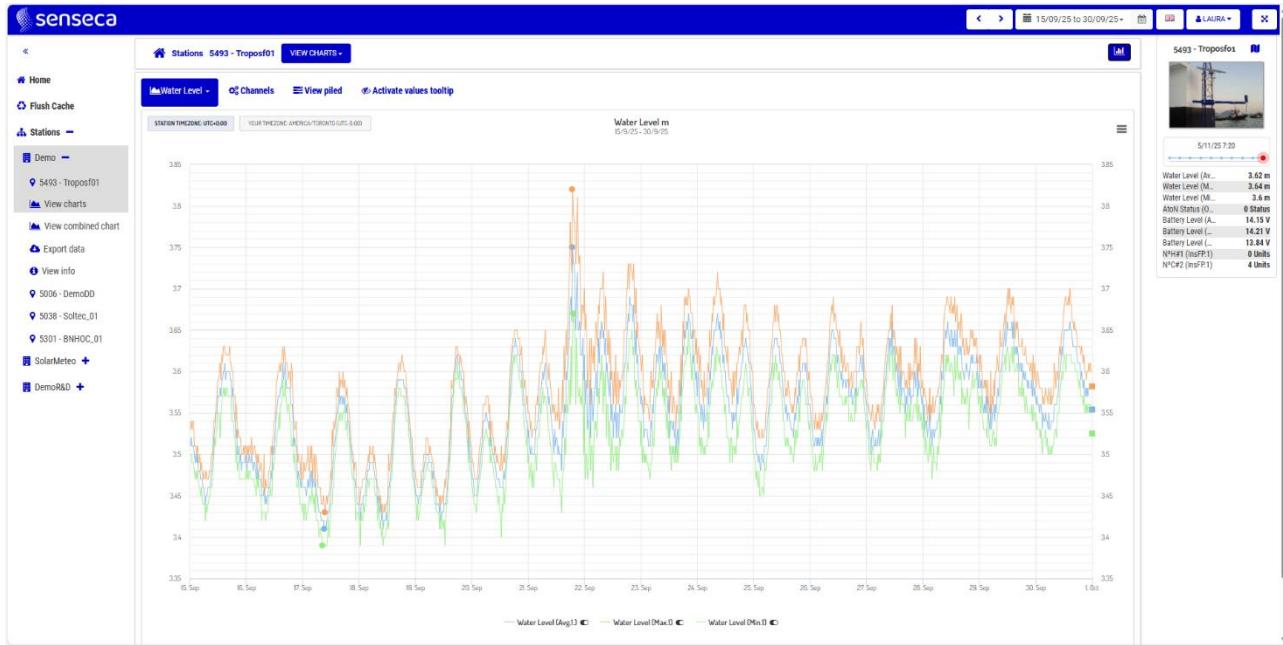
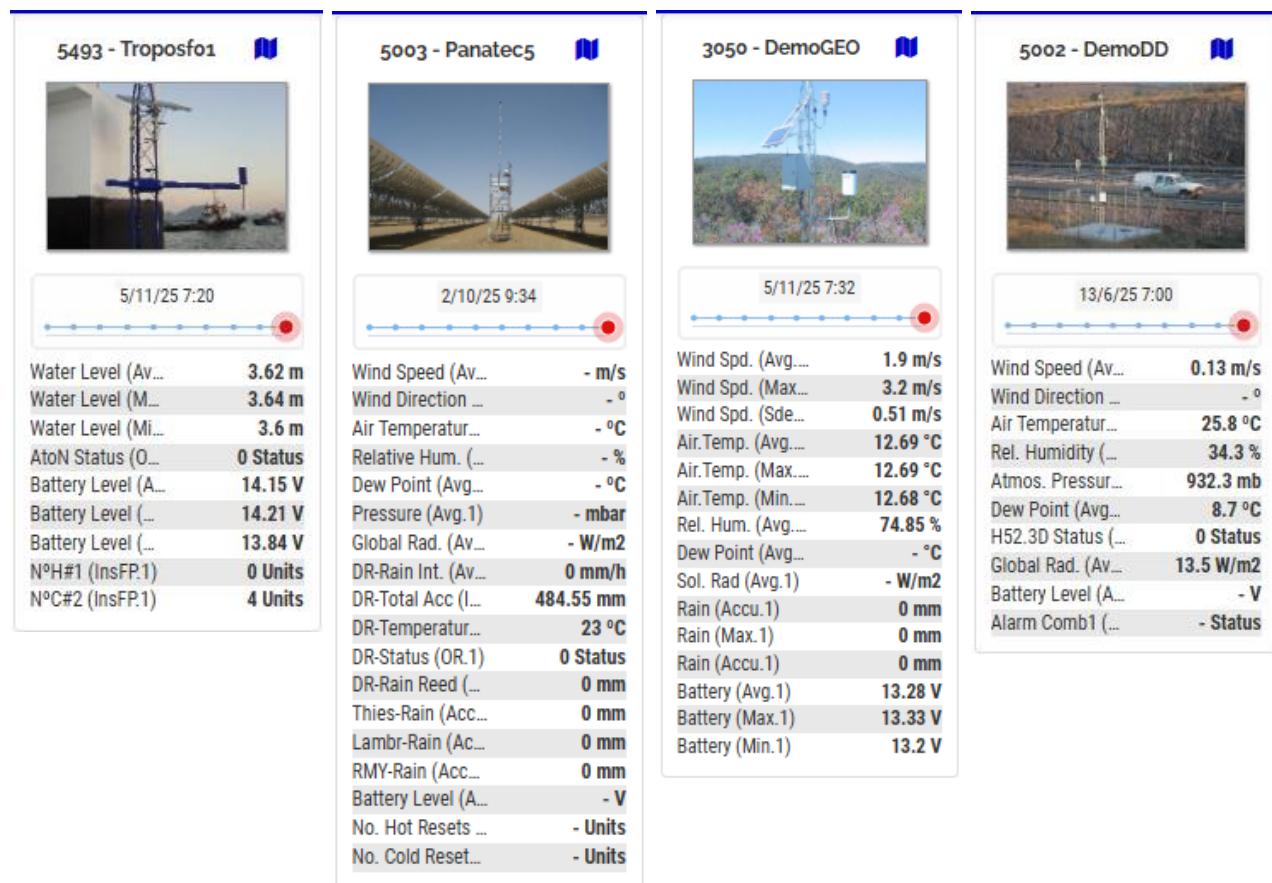


Fig. 4.17: Latest data panel

When the button is clicked a second time, the Latest Data menu folds down again, leaving more space on the screen for viewing the graphs.

The 'Latest Data' panel includes:

- **Basic station details:** serial number, station name, station image (if configured).
- **Most recent data** collected by the station for each channel.
- **A timeline slider** shows the last 10 storage periods; dragging the slider allows inspection of each record.

**Fig. 4.18: Latest data panels**

5 Mobile Devices

Webtrans 4K is fully compatible with mobile platforms, preserving all functionality described in this document.

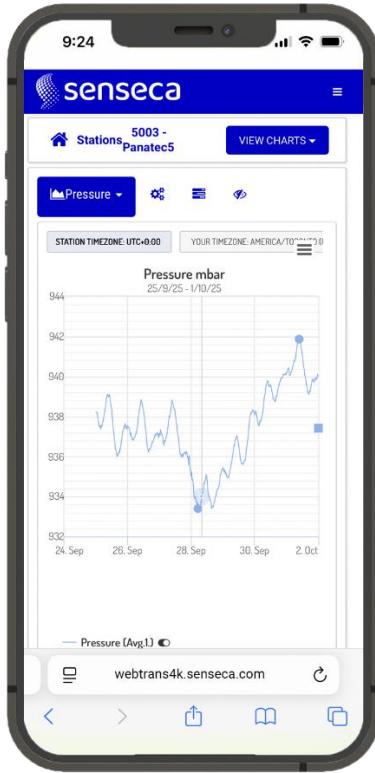


Fig. 5.1: Data charts on mobile platforms

On mobile devices, multi-touch gestures such as zooming and tapping for tooltips are fully supported on the chart.

All menus remain accessible via the top navigation bar and its drop-down menu 

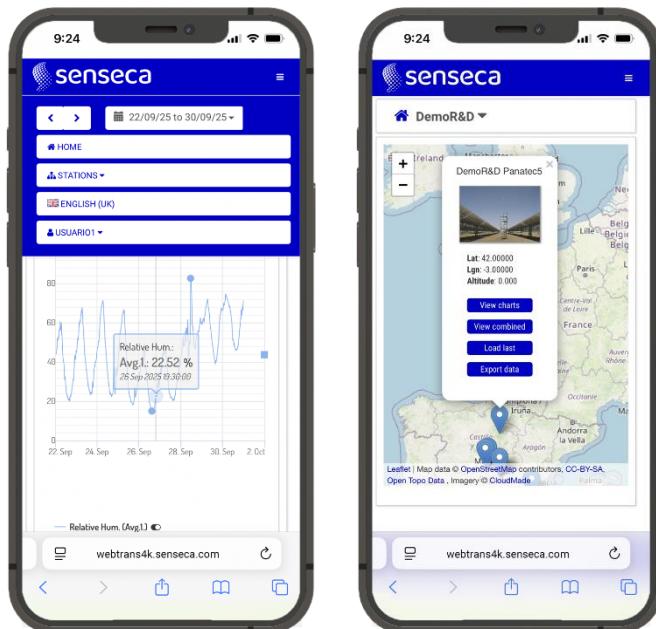


Fig. 5.2: Webtrans on mobile

NOTES

WARRANTY

The manufacturer is required to respond to the "factory warranty" only in those cases provided by Legislative Decree 6 September 2005 - n. 206. Each instrument is sold after rigorous inspections; if any manufacturing defect is found, it is necessary to contact the distributor where the instrument was purchased from. During the warranty period (24 months from the date of invoice) any manufacturing defects found will be repaired free of charge. Misuse, wear, neglect, lack or inefficient maintenance as well as theft and damage during transport are excluded. Warranty does not apply if changes, tampering or unauthorized repairs are made on the product. Solutions, probes, electrodes and microphones are not guaranteed as the improper use, even for a few minutes, may cause irreparable damages.

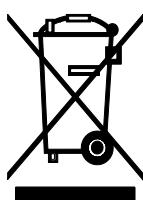
The manufacturer repairs the products that show defects of construction in accordance with the terms and conditions of warranty included in the manual of the product. For any dispute, the competent court is the Court of Padua. The Italian law and the "Convention on Contracts for the International Sales of Goods" apply.

TECHNICAL INFORMATION

The quality level of our instruments is the result of the continuous product development. This may lead to differences between the information reported in the manual and the instrument you have purchased.

We reserve the right to change technical specifications and dimensions to fit the product requirements without prior notice.

DISPOSAL INFORMATION



Electrical and electronic equipment marked with specific symbol in compliance with 2012/19/EU Directive must be disposed of separately from household waste. European users can hand them over to the dealer or to the manufacturer when purchasing a new electrical and electronic equipment, or to a WEEE collection point designated by local authorities. Illegal disposal is punished by law.

Disposing of electrical and electronic equipment separately from normal waste helps to preserve natural resources and allows materials to be recycled in an environmentally friendly way without risks to human health.



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