

NEW GENERATION OF WEATHER STATIONS



STATIONS WITH NEW TECHNOLOGY

The New Generation of Weather Stations are suitable for applications as research and agriculture projects.

It consists in a low cost equipment with adjustable settings and new technology for data recording and processing.

It differs from the previous generation due to its more advanced configurations, which provide efficiency on data record and collection, and more flexibility to the user for downloading data in a self-reliant way.

Besides, the installation allows simple systems structuring to assist low cost projects.

MORE SELF-RELIANCE FOR USERS

For a more convenient operation of the weather station, as an option, the new generation products allow the user to collect the station's data, downloading it on the field where installed.

This option offers more self-reliance to the users, since choosing the USB port installation on the new generation weather station brings you two possibilities to make the project more cost-effective:

- Data downloading through direct communication;
- In-field battery charging.

In addition, selecting the new generation weather station monitoring sensors is completely configurable. Users can choose the sensor's combination according to their necessities.

The available sensors to the new generation of weather stations are:



Temperature and Air Humidity



Atmospheric Pressure



Radiation



Rain



Level



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APPLICATION

The new generation weather of stations brings to the market a flexible and independent use proposal, ideal to agrometeorology projects and meteorological researches at universities, in its meteorological monitoring version, and ideal to limnometry on dam and rivers monitoring, with the level monitoring version.

MORE EFFICIENCY AND RELIABLE SYSTEMS

More technical and scientific, the new generation of weather stations comply with all the World Meteorological Organization (WMO) and Food and Agriculture Organizations of the United Nations (FAO) specifications, offering the same previous sensor's accuracy in a Standard system which offers a data package and ready-to-use programs in order to help the final users on data viewing.

SPECIFIC DATALOGGERS

The new stations dataloggers have two models:



*DataLogger for
Level
Monitoring*



*DataLogger for
Meteorological
Monitoring*

SUPPORT SYSTEMS

For more convenience on user support, in the front side of the meteorological station dataloggers there is a fixed QR Code. This code contains the main information about the equipment.

It is very important that this code is not damaged or violated, since reading it through any QR Codes application (found freely on application distribution platforms both for Android and iOS), the user will be able to access data such as: purchase date, request number, type of communication, type of logger being used on the station, contained sensors, and other information required, so that we can provide a more suitable assistance to the product.



CHARACTERISTICS

Sensors	Specifications
Temperature and Humidity	Relative humidity accuracy: $\pm 2\%$
	Temperature accuracy: $\pm 0.3^{\circ}\text{C}$
Atmospheric Pressure	Operation range of relative humidity: 0 - 100% relative humidity
	Temperature operation range: -40 to $+125^{\circ}\text{C}$
	Pressure range: 10 to 1300 mbar
	Resolution: 0.065 / 0.042 / 0.027 / 0.018 / 0.012 mbar
Radiation - PAIR	Accuracy 25°C, 750-1.100 mbar: -1,5 to +1,5 mbar
	Accuracy -20°C to $+85^{\circ}\text{C}$, 300-1100 mbar: - 2,5 to 2,5 mbar
Radiation - Global	Range: 400 – 700 nm
	Sensitivity: typical 5 μA for 1000 $\mu\text{mol s}^{-1} \text{m}^{-2}$
Rainfall – with drain trap	Linearity: Maximum offset from 1% to 10.000 $\mu\text{mol s}^{-1} \text{m}^{-2}$
	Accuracy: Maximum absolute error upon sunlight is $\pm 5\%$ and typically $\pm 3\%$
	Sensitivity: Typically 75 μA per 1.000 W m^{-2}
	Linearity: Maximum offset of 1% in 3000 W m^{-2}
Rainfall – without drain trap	Wavelength range: 400 to 1100 nm
	Collection sector: 200 mm diameter ± 0.3 mm in coated aluminium
Rainfall – basic	Tipping mechanism content: 0.2 mm
	Instrument sensitivity: 1 pulse/tipping
Rainfall – with drain trap	Measurement range: 0 to 700 mm/hr
	Collection sector: 200 mm diameter ± 0.3 mm in coated aluminium
Rainfall – without drain trap	Tipping Mechanism content: 0.2 mm
	Instrument Sensitivity: 1 pulse/tipping
Rainfall – basic	Measurement range: 0 to 700 mm/hr
	Collection sector: 214 cm^2
Level – Titanium 10mm diameter	Range: On a daily basis 0.00" to 99.99" (0.0 mm to 999.8 mm) / Total 0.00" to 199.99" (0.0 mm to 6553 mm)
	Accuracy: To rainfall rates up to 100 (4"/hr): $\pm 4\%$ of total or ± 1 tipping (0.2mm/0.01"), which is greater
Level – Ceramic, 25mm diameter	Accuracy: $\pm 0,1\%$ FS, $\pm 0,25\%$ FS, $\pm 0,5\%$ FS available. Includes non-linearity, hysteresis, repeatability, and zero and interval settings. Note: $\pm 0,1\%$ not available with mV output
	Range: 10mWG to 350mWG
Level – Stainless Steel and Silicon, 25mm of diameter	Operation Temperature: -4°C to $+50^{\circ}\text{C}$
	$\pm 0.1\%$ optional $\pm 0.25\%$ FSO BFSL,
Level – Navy Bronze, diameter of 25mm	Range: 10mWG to 100mWG
	Operation Temperature: -20°C to $+60^{\circ}\text{C}$
Level – Navy Bronze, diameter of 25mm	$\pm 0.06\%$ optional $\pm 0.1\%$ FSO BFSL,
	Range: 0.5mWG to 100mWG
Level – Navy Bronze, diameter of 25mm	Operation Temperature: -20°C to $+60^{\circ}\text{C}$
	Accuracy: 10mWG to 100mWG
Level – Navy Bronze, diameter of 25mm	Range: $\leq \pm 0.25\%$ FS BFSL (0.1% optional)
	Operation Temperature: -20°C to $+60^{\circ}\text{C}$

SETTINGS

See how to set your station

A WEATHER STATIONS	
1	FIXED STATION
2	PORTABLE STATION
B SENSORS	
1	TEMPERATURE AND HUMIDITY
2	ATMOSPHERIC PRESSURE
3	RADIATION – PAIR
4	RADIATION – Global
5	RAINFALL – with drain trap
6	RAINFALL - without drain trap
7	RAINFALL – basic
8	LEVEL - Titanium 10mm diameter (Accuracy: $\pm 0.1\%$, $\pm 0.25\%$ or $\pm 0.5\%$)
9	LEVEL - Ceramic, 25mm diameter (Accuracy: $\pm 0.25\%$ or $\pm 0.1\%$ optional)
10	LEVEL - Stainless Steel and Silicon, 25mm diameter (Accuracy: $\pm 0.1\%$ or $\pm 0.06\%$)
11	LEVEL - Navy bronze, 25mm diameter (Accuracy: $\pm 0.25\%$ or $\pm 0.1\%$ optional)
C BATTERY	
1	45 days with data reading every 60s and data recording every 30min
2	180 days with data reading every 60s and data recording every 30min
3	360 days with data reading every 60s and data recording every 30min
D DATA	
1	MANUAL COLLECTION

