

## Meteorology — mobile monitoring station



### Description

MTX offers meteorological monitoring stations designed for temporary installations, therefore extremely flexible, easily transportable and equally easy to set up.

In general, MTX mobile stations are typically developed on a stainless steel tripod, with a central support, which in some cases can be telescopic. This allows the positioning of the weather sensors at the desired height.

The tripod has a levelling system that allows it to be easily installed even on steep terrain. The extremely robust structure has been developed to provide mobile workstations which, at the same time, be kept on the monitoring site for several weeks without the equipment being endangered due to the stability of the supporting structure.

To simplify the set-up for the realization of mobile stations, we prefer to propose compact multiparametric sensors. Basically, these are sensors that stem from the evolution of a static 2-axis anemometer with ultrasonic technology, for measuring wind speed and direction, to which it is possible to add options creating variable solutions to measure the remaining meteorological parameters. This solution allows the availability of transducers for monitoring the main physical quantities of meteorological interest in a single instrument, making it light and compact.

For the continuous operation of the monitoring system, typically, photovoltaic energy is used. Depending on the sensors' power consumption inserted in the system and the power used for the communication system, MTX will define the dimensioning of the power supply system. This can be composed of a solar panel integrated to the datalogger or of external modules with variable dimensions from 10 to 30W.

Similarly, MTX will take care of dimensioning backup batteries, essential for continuity of operation at night or in periods lacking in sunshine. The batteries can be integrated into the data logger or, in case of significant energy capacities, external. In this case, a box will be prepared with key locks and an anti-condensation ventilation system, which can be installed on a tripod through a quick "bayonet" coupling.



Application example



Technical specifications may be varied without prior notice

It is clear that the availability of low-energy devices, such as those offered by MTX, will make it possible to achieve extremely compact solutions, suitable for the installation of mobile monitoring stations.

The acquisition, storage and transmission of data is entrusted to a low power datalogger that MTX offers for applications characterized by a limited number of sensors. The data logger is characterized by its small size and low energy consumption. The acquisition unit is supplied and assembled in an extremely robust, waterproof IP67 housing suitable for outdoor applications.

The data produced and transmitted by the station, in "push" mode through the mobile network (4G or NB-IoT), can be managed directly by the user as the datalogger uses standard protocols (for example csv file on ftp protocol). Alternatively, the software applications that MTX proposes for the management of monitoring stations can be used.

The data can also be downloaded locally via USB connection; the data structure remains unchanged, therefore the user can use CSV files for the subsequent analysis of the acquired data.

Finally, we would like to point out that, as a user interface for datalogger management, an Android App is available. This enables the use of mobile phones for the real-time view of the data, to configure the device and download the stored data.

For the transportation of the materials provided, on request, it is possible to supply suitcases with wheels or specially designed bags.

For further information about our products, we invite you to visit our website [www.mtx.it](http://www.mtx.it).



Multiparametric sensor



Stainless steel telescopic tripod



Datalogger Lowpower complete with real-time data display through Android App

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