ST-ROAD

Monitoring of meteorological road condition

NESA

Environmental monitoring
system and remote controls

ST-ROAD

What is it?

ST-ROAD stations are realized and used for the monitoring of **specific parameters** that could have a relevant **impact on the normal viability in**, road, rail or similar, or more simply for the control of **weather conditions along roads**.

Stations, **fully automatic**, operate both in **stand-alone mode**, and **integrated in a monitoring network** for a real time and constant check of **operative conditions**.

In addition to the visibility measure, the kind and amount of precipitation and the road conditions, elements that characterize this type of monitoring, **other general weather sensor** and **surveillance cameras** can be integrated.

Each station, in addition **to collect and transmit continuously data**, it's able to discriminate **thresholds or alarm conditions,** alerting directly the responsible person (and the eventual remote control data center), permitting an immediate action and **aimed to restore optimal operative conditions**.

Stations can be **immediately integrated in a data network for rain and rail systems**, thanks to the use of **standard protocols** (as well as TCP-IP) and to different **interfacing** systems, **from the optic fiber to the GPRS or UMTS, to the radio**. An high performance data concentrator as the TMF datalogger, permits an easy remote control of all parameters measured by the station.

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How is it composed?

Mainly components of a **ST-ROAD** system are:

Datalogger NESA TMF100 o TMF500 for the local registration of all parameters, the basic elaboration, their transfer to a collection center, via cable, fiber, GPRS, UMTS, or radio, by FTP protocol. The operation can be done continuously or at programmed acquisition intervals and set alarms up for every parameter. The datalogger is equipped with **Linux** operating system for an easy management and interfacing using special **web pages**.

VISIBILITY SENSORS, PRESENT WEATHER AND ROAD CONDITIONS:
can be of different typologies depending on parameters to be measured and on installation requirements.

ALARM SYSTEM: **Local optic/acoustic alert System** on customizable and adaptable measure's thresholds, for every applications, , with possible use of LED panels to give indications and support to the population in case of emergence. Or SMS **message** sending to the contact person and **alert to the control and data collection center**.

POLE: Mechanical structures in galvanized steel or anodized aluminium for the instrumentation and sensors fixing, with specific supports.

OTHER SENSORS AND OPTIONAL ACCESSORIES: Depending on the application can be **integrated standard meteorological sensors** or specific sensors for air and water pollutions. Can be added also **a camera, whose images are sent together with data (at the same time)** for a visual control and check of the last meteorological condition on the monitored way.

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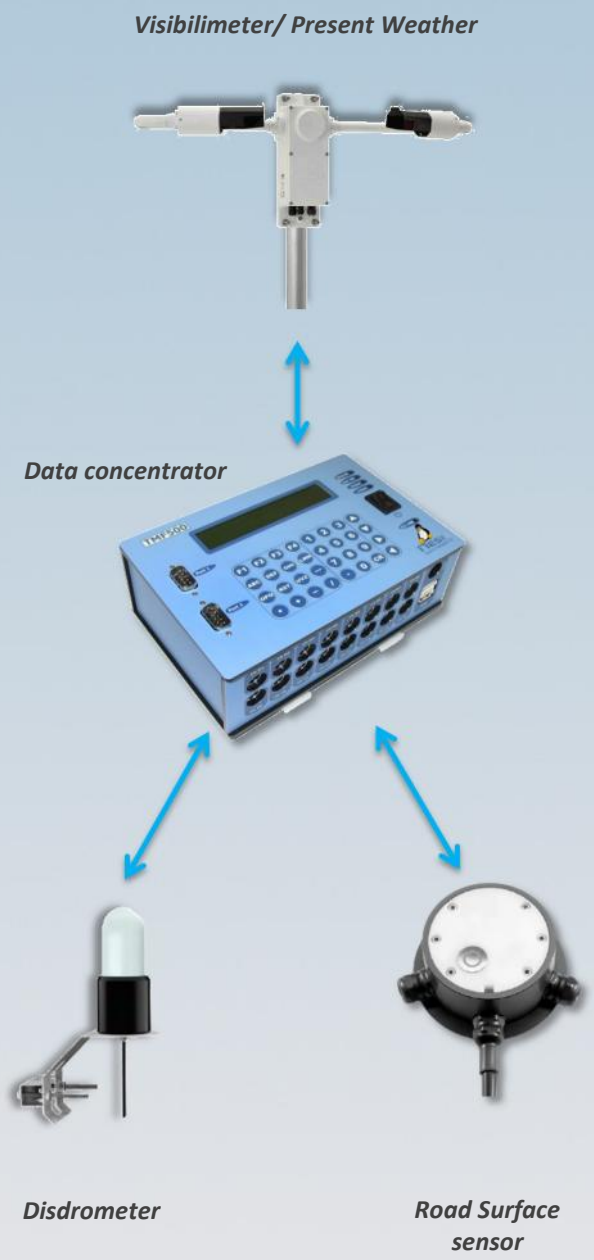
Performances

- ✓ **Sensors** in according to **WMO standard**, (World Meteorological Organization)-Annex No. 8.
- ✓ **Data elaboration**: instantaneous data, average, totalization, gust, standard deviation, etc.
- ✓ **Data transmission**: GPRS/UMTS, satellite, modem, radio, via cable or fiber.
- ✓ Different transfer **protocols**: serial, modbus, TCP, FTP, etc.
- ✓ Possibility of **specific alarms on threshold** or state.
- ✓ **Real time visualization of instantaneous data** for every measured parameter and programming, both in local and on remote.
- ✓ Automatic and pre-configurable management of **on threshold or on event alarms**, with activation of relay commands or **SMS sending directly from the station.**
- ✓ Large data memory both internal and on removable support (USB) able to record a data storage of more than 4 years.
- ✓ Possibility to connect to the datalogger other sensors or instruments with analogical interface 0÷2Vdc or 4÷20mA or digital (contact or frequency) or serial (RS232, Rs485, etc.) also of other manufactures.
- ✓ Low energy consumption, with supply by primary network (110/220Vac) or by photovoltaic panel (it depends on connected sensors).
- ✓ Periodic recalibration service of all instrumentation with test report.



If you would like to have more information or require a quotation, please contact our Sales department:

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