

MultiTEL

The low-cost solution for remote monitoring of compressed gas cylinders, cylinder bundles and cryogenic storage dewar



MultiTEL is an integrated low-cost device developed to meet the needs of remote monitoring for compressed gas cylinders, cylinder bundles and cryogenic storage dewar, ensuring high levels of security and essential support for logistics services through advanced remote monitoring functions on the GPRS network with an integrated modem. GPRS technology reduces management costs for remote data transfer, allowing a high frequency of updates from the device.

There are two versions available:

- **MultiTEL 4-20**: to monitor up to 4 analog inputs with two-wires passive 4-20mA sensors;
- **MultiTEL BLE**: to monitor up to 7 Bluetooth Low Energy (BLE) based wireless sensors.

MultiTEL can be supplied by external voltage 24Vdc, solar panel or long-life external battery (about 2 years). The device is housed into a plastic box suitable for outdoor use, with IP65 protection.

To ensure low power consumption, required for operation with solar panel and long-life battery solutions, the device works in sleep-mode, and periodically wakes up operating for a short time. Sleep-mode is programmable by the user from 1 to 24 hours, with a minimum step of 1 hour.

Standard functions are:

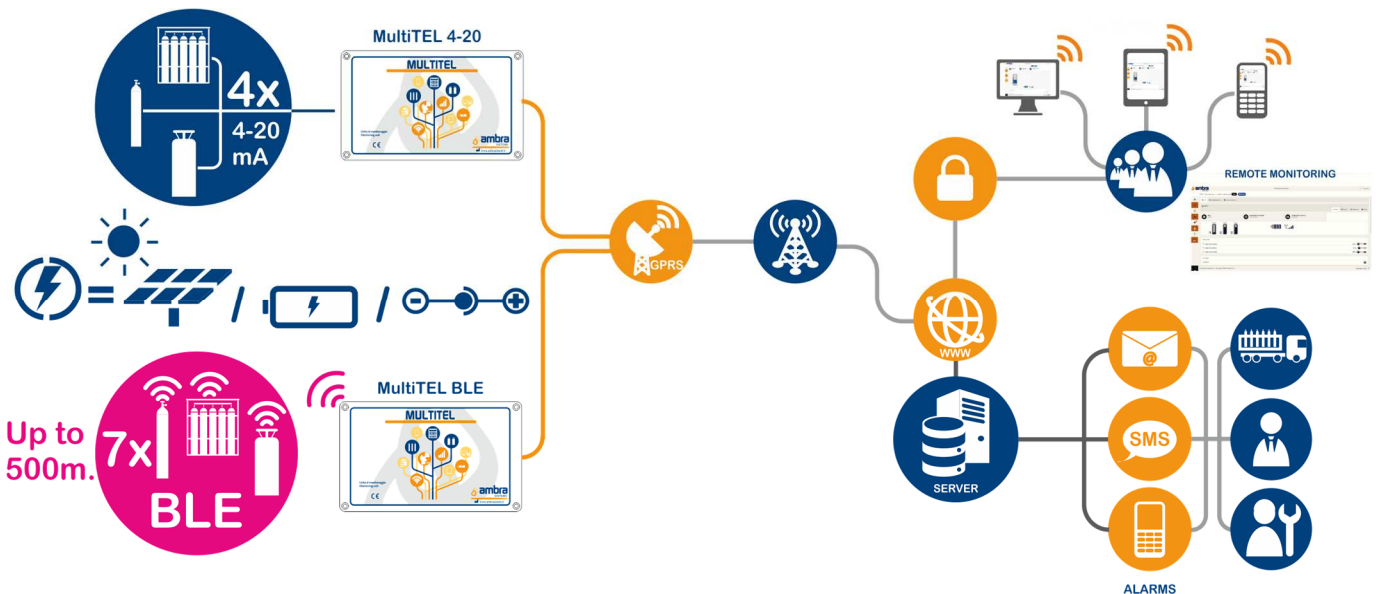
- Measurement sensors acquisition;
- Connection to the nearest GSM cell at scheduled time;
- Transmission of periodic updating messages about measurements to the server;
- Transmission of alarm messages if the programmed thresholds are exceeded to the server;
- Acquires new settings parameters configured by *CrioSystem Supervisor*.

The regular measures updates allow to manager of the distribution of compressed and liquid gases in transportable dewar to improve the organization of the production to optimize deliveries and manage, with reasonable time margins, any critical situations due by exceptional consumption or plant malfunction.

More often it is preferable to provide oversized or extra storages, to avoid unexpected consumption problems, thus facing substantial investments without effectively satisfying the customer, subjected to discomfort due to the contingent spaces.

Thanks to the *CrioSystem Supervisor* web platform it is possible to be constantly updated about the situation of stocks and alarms wherever you are, provided that an internet connection and access credentials are available.

The platform is operative 24h/7 and is able to notify alarm conditions detected by the **MultiTEL** device to the operators in charge to manage the plants. These functions can be extended to direct customer too, as an optional service provided with the gas supply.



The installation of **MultiTEL** device does not require specialized skill operators and produces minimal impact on time and costs.

All the inputs monitored by **MultiTEL** device are set from remote by the WebAPP interface of the *CrioSystem Supervisor* platform, with association about the type of gas and storage, as well as the Min./Max Alarm thresholds or Min. Pre-Alarm/ Min Alarm. A database of measurements is provided to allow graphical and tabular format with useful filtering tools.

The alarms transmitted by **MultiTEL** device are received to the *CrioSystem Supervisor* platform which in real time stores and process them to the operators in charge to manage the plants, forwarding specific e-mail, SMS and text-to-speech notifications. All the flow and the alarm history are available on *CrioSystem Supervisor* with single acknowledges report.

Local alarm signals are not provided on **MultiTEL** device, however a display present on the internal electronic board allows to simplify the installation, indicating the inputs and the modem operating status.