PULSIA Synop

Synoptic station

PULSONIC offers a solution for synoptic observation consisting of an automatic weather station equipped with a WIFI modem to communicate locally with the observer's computer.

The observer can view the data in near real time and validate or complete the WMO/ICAO message (e.g. SYNOP BUFR).

At the same time, meteorological data are transmitted to the National Meteorological Agency for forecasters and to archive the data in the climatological database.

The key features of the solution:

- Access to near **real-time** weather data
- Automatic generation of **WMO/OACI messages**
- **WIFI** connection with the observer's desktop
- **Easy installation** thanks to WIFI, no need for a wired connection between the station and the observer's office
- **Easy and quick** maintenance
- Very **robust** system
- Very good instrument **accuracy**

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P4-100 | Data logger	
Material	Cast-aluminum
IP Class	IP66
Communication	2G, 3G, 4G, WiFi, optical fiber, Ethernet

Solar generator enclosure	
Material	Cast-aluminum
Power supply	Solar panel NiMh/Pb Battery

T-shape stand	
Material	Galvanized steel
Tube	Ø50mm

3029 | Rain Gauge	
Principle	Tipping bucket
Accuracy	± 3% < 700mm/h
Resolution	0.2 mm
Collecting funnel	400 cm²

PT-100 | Air temperature probe	
Principle	Pt100
Class	1/10 DIN
Range	-40°C +70°C
Accuracy	0.1°C

TH-0155 | Air hygrometer	
Range	0 to 100%
Resolution	1%
Accuracy	±3%

Radiation shield Y	
Material	Thermoplastic
Dimensions	Ø13 cm x 26 cm

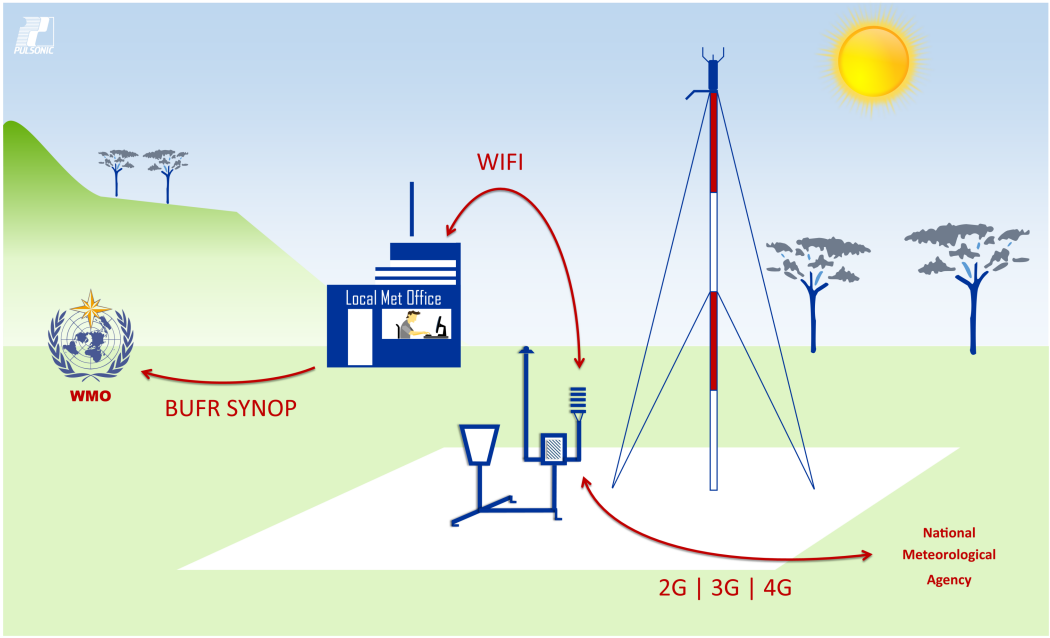
Pyranometer | Class B - First Class ISO 9060	
Spectral range	285 to 3000 nm
Sensitivity	10 µV/W/m²
Max. radiation	3000 W/m²

ALIZIA 380 | Ultrasonic wind sensor at 10 m (Speed)	
Range	0-60 m/s
Starting threshold	0.01 m/s
Accuracy	± 0,2 m/s (from 0 to 10 m/s) ± 3 % (from 10 m/s to 60 m/s)
Max wind	80 m/s

ALIZIA 380 | Ultrasonic wind sensor at 10 m (Direction)	
Range	0° à 360°
Accuracy	± 2°
Resolution	1° or 0,1°

PREMO | First Class Barometer	
Range	500…1200 hPa
Accuracy	± 0.15 hPa (from -20 and +85°C)
Stability	± 0.05 hPa / year

Synoptic weather station



- The weather station is installed in the meteorological garden
- Regularly, the weather station communicates its data locally to the office of the observer (WiFi)
- Observations can be added to complete the pre-coded SYNOP BUFR message
- At synoptic times, the SYNOP BUFR message is broadcast on the WMO GTS
- Other communication links (2G|3G|4G|Ethernet|Fiber optics) allow the station to send its data to the central server located at the National Meteorological Agency or to other authorized servers (up to 7 different servers)
- If the weather station is installed on an aerodrome, it is possible to display aeronautical parameters thanks to dedicated displays. Aeronautical messages can be added (METAR, SPECI)