PLUVI-ONE
rain monitoring and early warning system

Pluvi-ONE is a new integrated system for rain monitoring and early warning information. Pluvi-ONE performs two different tasks: produce accurate rain measurements (including lightning and optional water level), produce early warnings in case of alarm situations. The system is designed for measuring in remote and unattended locations and to send its results and alarms.

Highlights

- Rain and Lightning monitoring system.
- Optional water level and T+RH% sensors
- Smart rain analysis: totals and running cumulate values for alarm purpose
- Large memory 16 MB plus external memory 4 GB
- GPRS/3G for remote communications
- Class A rain gauge with double rain gauge redundancy
- Local display readable from outside
- SMS alarms, SMS messages receive&reply

Pluvi-ONE is a complete system including rain gauge, data controller, power system and communication part. Pluvi-ONE has several features which produce the state of the art solution for rain monitoring and early warning applications.

- CLASS A RAIN GAUGE
- LIGHTNING DETECTOR
- OPTIONAL AIR TEMPERATURE + RH% SENSOR
- OPTIONAL WATER LEVEL SENSOR
- CONTROLLER
- POWER SUPPLY
- COMMUNICATION

INPUTS
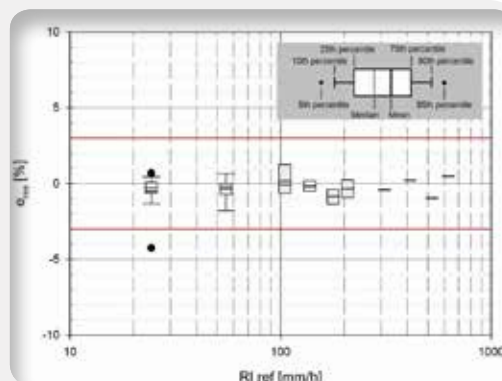
N.2 for two rain gauges.
N.1 for included temperature sensor
N.1 for optional temperature & RH sensor
N.1 for optional water level sensor
N.1 for one SDI-12 sensor

CLASS A RAIN MEASUREMENTS

The integrated rain sensor is a tipping-bucket rain gauge.
Pluvi-ONE adjusts its measurements using a correction formula, this formula produces a class A system in conformity to the UNI11452:2012 standard for rain gauge intensity.

LIGHTNING SENSOR

Built-in sensor to detect the lightning strikes event and its distance:
- Date/time each event (strike)
- Estimation of the storm front (not strike) within an area of in 6÷40 km divided in steps (5, 6, 8, 10, 12, 14, 17, 20, 24, 27, 31, 34, 37, 40 Km).

WATER LEVEL MEASUREMENT

One analog input to receive 0/4-20 mA or 0-2 Volt coming from water level sensor, LSI LASTEM supplies water level sensors based on different technologies (piezometric, ultra-sonic, radar).
SDI-12 input can be used for connecting SDI-12 water level sensor.

REMOTE COMMUNICATION

Pluvi-ONE can be equipped with the following optional communication devices:
- GPRS/3G modem
- UHF radio
- Satellite (Iridium, Inmarsat and GOES)
Communication device must be chosen from the options. Data destinations can be programmed (by GPRS/3G) in FTP mode to up to three FTP sites.

▶ LOCAL COMMUNICATION TO PC

Pluvi-ONE can be connected to a local PC using the following modes:
- RS232/485 port
- Bluetooth (optional)
- USB port for data download
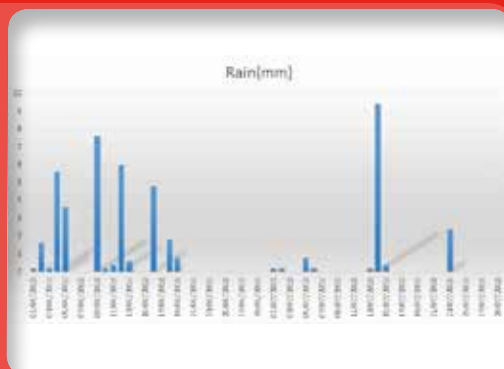- Wi-Fi
- Ethernet

▶ MEMORY

Pluvi-ONE has a big internal memory of 16 MB, plus one USB port to address on USB-Key used as extractable memory with additional 4 GB space.

▶ DATA STORING (RAIN)

Pluvi-ONE stores and send in ASCII format, the following information:
- Rain intensity (total over 1 minute of rain)
- Rain totals over three statistical bases (programmable from 1 min to 24 hrs). Rain totals over three statistical bases using running totals with reset (i.e.: total of the rain from midnight and reset after 24 hrs) and programmable resolution.

▶ DATA STORING
(Temperature, RH% water level and other parameters)

Pluvi-ONE store and send in ASCII format the following information regarding air temperature, RH% and water level:
Instant/min/max/ave/standard deviation over three statistical bases
(programmable: from 1 min to 24 hrs).

▶ HEARLY WARNING ALARMS

Pluvi-ONE generates alarm information by SMS, by FTP and by the local digital outputs. Alarm logics are user's programmable.

● SMS MESSAGES

Apart from the SMS sent in case of alarm situations, Pluvi-ONE responds to incoming SMS messages sending back via SMS, the following:
- Instant values
- Statistical values (running values)
- On-line status

● LOCAL OUTPUTS (REED RELAY)

Pluvi-ONE has three outputs to trigger external devices using programmable logics.

● POWER SUPPLY

Pluvi-ONE has two power supply options:
1) Power supply by integrated solar panel and battery
2) 24 Vdc

● LOCAL DISPLAY

Pluvi-ONE is equipped with a display, which can be read from external side without to open its box

● addresses and contacts