

AWS-X technical specifications

Solar Radiation

Sensor type: Silicon Photodiode
Spectral Response: 400 to 1100 nanometers
Operating Temperature: -40/+65° C
Range: 0-1500 W/m²

Anemometer

Wind Speed sensor type: polycarbonate wind cups and magnetic switch
Wind Direction sensor type: UV-Resistant ABS wind vane and potentiometer
Wind Speed accuracy: +/- 1 m/s or +/- 5% whatever is greater
Wind direction: +/-7°

Rain Collector

Sensor Type: Tipping Bucket with magnetic reed switch
Dimensions: 16,5 cm diameter x 24 cm height
Collection Area: 214 cm²
Resolution: 0,2 mm

Temperature/Humidity

Digital sensor type SHT15
RH Operating range: 0-100% - T operating range: -40/125°
RH response time: 8 sec
Energy consumption: 80 microW
RH accuracy: +/-2%
Temperature accuracy: +/-0.3°C

Atmospheric pressure

Sensor type: semiconductor (FreeScale 2102A)
Accuracy +/- 1%
range: 800-1100 Millibar

GPRS specifications

AWX sends UPD packets of data to a static IP address.
It can send these packets at a programmable interval from 2 minutes to 1 hour.
If signal is down or no channels are temporarily available, the unit will store up to 14 packets and will send them as soon as the signal comes back.

Data Logging specification

The unit is designed to send data to a server so it has no large logger.
It has an emergency logger, that will record data every hour for Wind, Temperature, Rain for 15 days. These data can be recovered anytime sending SMS commands that will trigger the upload in GPRS.
A data logger option can be purchased separately, and allows logging of up to 303 days, if sampling interval is set at 60 minutes.

Battery and Solar Panel

The AWX station is equipped with a 7AH battery and an optional 20VA solar panel.
The average power consumption of the unit, with no voice and if programmed to send data every hour is 15 ma.
This makes it possible to operate the unit for over 2 weeks with a cloudy weather.
The panel can recharge the battery in one sunny day.