

Mercury AGRO

Agro-meteorological
weather station

Description

Mercury AGRO stations are designed to agricultural areas and farms monitoring.

Professional weather station, it allows reliable long-term measurements for a competitive investment.

Main weather measurements

- Air temperature and humidity
- Precipitation: intensity and quantity
- Wind speed and direction
- Solar radiation
- Soil temperature
- Soil moisture
- Leaf wetness
- Evapotranspiration



Advantages

- Compliance with WMO recommendations
- Disease prevention, frost control, irrigation
- Smartphone App's for weather data visualization in real time
- Easy installation and maintenance

Robust and reliable weather station to prevent disease and irrigation needs.



AIR TEMPERATURE AND HUMIDITY SENSOR

Air temperature measurement

- Range: -40 to + 60°C
- Accuracy: $\pm 0,2^{\circ}\text{C}$
- Resolution: $0,1^{\circ}\text{C}$
- PT100 4 Wires

Air humidity measurement

- Range: 0 to 100%
- Accuracy: 2% from 0 to 90% and 3% from 90 to 100%
- Resolution: 1%

Dew Point

ULTRASONIC WIND SENSOR

Wind speed measurement

- Range: 0,25 to +40 m/s
- Sensibility: $\pm 0,13\text{m/s}$
- Resolution: 0,1 m/s

Wind direction measurement

- Range: 0 to 359 °
- Accuracy: 1°
- Resolution: 1°

PRECIPITATION SENSOR

Single spoon tipping bucket rain gauge

- Accuracy: $\pm 2\%$
- Catch area: 200 cm²
- Resolution: 0,2mm (or 0,5mm)
- Reed switch
- Adjustment screw

LEAF WETNESS SENSOR

Measures

- Measure range: Yes or No
- Sample: 10 min

SOIL MOISTURE SENSOR

Volumetric soil moisture

- Range: 0 to 70% Vol
- Resolution: 1%
- Accuracy: $\pm 3\%$
- IP68

GLOBAL RADIATION SENSOR

Pyranometer Class C (ISO 9060:2018)

- Measure range: 0 to 2000W/m²
- Sensibility: 0,2mV/W/m²
- Spectral range : 360 to 1120nm
- No stability / year: < 2%
- No linearity: < 1%
- Temperature dependence : 0,04 \pm 0,04% / °C
- Calibration uncertainty: 5%

SOIL TEMPERATURE SENSOR

Soil temperature measurement

- At -5cm, -10cm, -20cm, -30cm, -50cm, -100cm
- Resolution: $0,1^{\circ}\text{C}$
- Accuracy: $\pm 0,1^{\circ}\text{C}$
- Dim: Length 102cm \varnothing 2cm
- IP68

Option : Auger kit

ML200 DATALOGGER

Power supply

- Power input: 9 to 36Vdc
- Solar panel input 12V and integrated solar controller
- Battery protection against deep discharge
- Protection against reverse polarity
- Current consumption measurement

Communication

- GPRS / 3G / 4G modem or Ethernet modem
- Strength and quality communication signal measurement
- Frequency of data transmission: 1min, 6min, 1h, 3h, 6h, or without
- Remote software upgrade / Remote maintenance

Sensors inputs

- Inputs protection against overvoltage and electromagnetic interference by plug-in fuses
- 9 sensors inputs:
 - 3 inputs PT100/TOR/0_5Vdc/-30_+40mVdc
 - 3 inputs 0_5Vdc / -30_+40mVdc
 - 3 inputs RS232/RS485/RS422
- 24Bits AC/DC controller – High accuracy

Monitoring and maintenance software

- Mercury Maintainer (no license)

PROTECTION ENCLOSURE

Protection box

- Dim : W400xH500xD210mm
- Material : Polypropylene
- IP 66 / IK10
- Closure : 2 key points
- Earth connexion
- Watertight cable routing and glands
- Gel lead battery : 12Vdc 18Ah or 28Ah

Options

- Protective cap against direct radiation
- Tamper-proof solar panel attachment

GENERAL FEATURES

Mechanical structure

- Material : Galvanized steel and/or ALU
- Painted White
- Corrosion resistant
- UV resistant shielded cables

Environmental feature

- Operating temperature: -40 to +65°C
- Storage temperature: -40 to +70°C
- Humidity: 0 to 100%

Conformity

- Standard EN 15518- 1-2-3
- Standard IEC 61000-4-2/4-3/4-4/4-5/4-6



www.sterela-meteo.com