



Weather Station WSC Agrar

HIGHLY COMPACT DESIGN

Local weather data with full-spec of precipitation meet the needs of farming.

Essentials

- Ultra-compact design – one of the smallest on the market
- Comprehensive weather data & full-spectrum of precipitation insights
- Integrable & OEM ready & Off-grid
- 80 years of meteorological expertise

Local weather data

The WSC Agrar weather station is one of the most compact designs on the market. It provides reliable local weather data in a user-friendly, low-maintenance package. With precise measurements of temperature, humidity, precipitation, wind, pressure and radiation it enables targeted management of comprehensive farm management.

The WSC Agrar is a modular and cost-effective solution.

The weather station is ideal for precision agriculture and digital farming. It can be easily integrated into existing systems and transmits data directly to the cloud. An off-grid power supply is ensured via a PV module with battery charging unit. It is a reliable weather station that is easy for end users to operate. The system has a modular design – from compact sensors to completely self-sufficient low-power field stations.

General Data

WSC Agrar Sensor: Polycarbonate, white transparent, 105 mm x Ø 102.4 mm, 0.212 kg, 6-15 volts low power (approx. 4 mA), 4-pin cable clamp connector, GPS receiver

Easy Integration Set: Mast adapter $\frac{3}{4}$ " (from Ø 50 mm to Ø 27 mm, polycarbonate, white, 0.013 kg) and battery charging unit (SDI12 connection)

Complete System (IP 54)

Article No.:

WSC Agrar sensor (4.9045.00.000), battery charging unit + mast adapter $\frac{3}{4}$ " set (510791), mast tube (510804), PV module with mounting bracket (510806), tripod (511153), screw-in ground sleeve (214852), SDI12 connector box (511104) for various sensors

THE WORLD OF WEATHER DATA



WSC AGRAR Sensor

Technical data



Precipitation: Full-Spectrum of Precipitation Insights

Precipitation type detection: Precipitation Y/N, hail, rain, snow, sleet, crystals
Measuring range: 0.001 ... 999 mm/h; resolution: 0.01 mm; droplet size: 0.25 ... 5.0mm, wetting mass 0 ... 100%, accuracy for rain: for 95% of all precipitation events (the deviation is less than 10% compared to the Thies CLIMA LPM reference).

Determination of the exact time of precipitation start & end, determination of precipitation type & intensity and quantity, detection of even the smallest amounts (not measurable with tipping buckets).



On request: advanced THERMACERN® features such as frost warning for frost protection irrigation, dew detection, etc.

Wind Speed & Wind Direction

- Wind speed: 0...35m/s, 0.1 m/s resolution, +/- 1 m/s RMS, up to 10 m/s, +/- 5 % RMS above 10 m/s
- Wind direction: 0...360°, 1° resolution, +/- 10° accuracy

Humidity & Option for Soil Moisture

- Relative humidity: 0...100 % rel. humidity, 0.1 % rel. humidity resolution, +/- 10 % accuracy; @20 °C and > 2m/s wind speed
- Via SDI12 e.g. Soil moisture sensor (up to 6) connectable

Global Radiation & PAR

- 0...1300 W/m², <1 W/m² resolution, +/- 10 % (+/- 130 W/m²), twilight 0 ... 1 KLUX
- PAR: 0 ... 2255 µmol/(s·m²)

Temperature

-30...+50 °C, 0.1 °K resolution, +/- 1 °C (-5...25 °C), accuracy wind speed > 2 m/s

Air Pressure

300...1100 hPa, 0.01 hPa, resolution ±0.5 hPa @ 20°C

Communication/Network

- E-SIM card, wireless communication,
- GPS receiver
- RS485, Thies ASCII, Modbus RTU
- SDI12 (via battery charging unit) other sensors connectable
- LTE-M, GPRS, NB-IoT
- Separate databases per customer
- Flexible archive and transfer intervals
- MQTT-based communication with cloud RESTful API for data access



PRODUCT STRUCTURE

The sensor forms the foundation of all configurations and is designed for low-power operation in agricultural environments. For OEM partners, it enables the direct integration of precise weather data into existing systems or digital platforms.

OEM business:
WSC Agrar Sensor



OEM business: WSC Agrar Sensor
with battery charging unit and adapter



Dealer/end user for
prototyping, field trials:
Complete system

Soil moisture sensor
connectable

Everything thought through - From OEM component to fully autonomous system - WSC Agrar adapts to the requirements of each application. Let's talk about OEM integration - tailored to your solution.

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More details WSC Agrar >



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