

Intelligent Traffic Solutions

Weather Station METEOS 101

ORT/SD-METEOS 101



ortana

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Ortana Meteorology Station is a professional intelligent measurement transducer with a digital interface for environmental applications and is especially designed for Traffic Applications with high mechanical strength and low maintenance requirement. The METEOS101 is an integrated design with ventilated radiation protection for measuring:

- Air temperature
- Relative humidity
- Precipitation intensity
- Precipitation type
- Precipitation quantity
- Air pressure
- Wind direction
- Wind speed



General Information

Interface	: RS485 Semi-Duplex Wire
Weight	: 2.44 kg (without cable), 2.9kg (with cable)
Protection Class	: IP65
Dimensions	: Ø 200 / 280 (h) mm
Housing Material	: Polycarbonate & Aluminum
Power Supply	: 24VDC +/- 10% < 5VA (heater is off) 24VDC +/- 10% < 30VA (heater is on)
Operation Temperature	: Between -40 °C and +70°C
Resolution	: 0.001
Operating Humidity	: 0 % RH to 100 % RH

Technical Specifications

Temperature

Principle	: NTC
Measuring Range	: -40°C to +70°C or -40°F to +158°F
Accuracy	: $\pm 0,2^{\circ}\text{C}$
Unit	: Celsius or Fahrenheit
Detection Time	: 30 ms
Measuring Time Range	: 1-10 minutes (At the detection cycle frequency, measurement can be given)

Relative Humidity (Absolute Humidity, Mixing Ratio, Dew Point, Relative Pressure)

Principle	: Capacitive
Measuring Range	: 0 % RH to 100 % RH
Accuracy	: ± 2 % RH
Unit	: g/m ³
Detection Time	: 30 ms
Measuring Time Range	: 1-10 minutes (At the detection cycle frequency, measurement can be given)

Precipitation Intensity

Principle	: Doppler Radar
Measuring Range	: 0-6mm (rain), 10.5-40mm (hail), 0-10mm (snow, particle sizes)
Measurement Start	: 1 mm/h
Reproducibility	: typ.>90%
Measuring Types	: Rain, Snow, Hail
Detection Time	: 250-300 ms
Measuring Time Range	: 1-10 minutes (At the detection cycle frequency, measurement can be given)

Technical Specifications

Wind Direction

Principle	: Ultrasonic
Measuring Range	: 0° to 359,999°
Accuracy	: $\pm 3^\circ$
Measurement Start	: 0.3 m/s (wind speed)
Detection Time	: 100 ms
Measuring Time Range	: 1-10 minutes (At the detection cycle frequency, measurement can be given)

Wind Speed

Principle	: Ultrasonic
Measuring Range	: 0 m/s to 75 m/s
Accuracy	: ± 0.3 m/s or 3 % of measurement / highest value applies
Heating	: 25VA - 30VA at 24 VDC
Measuring Start	: 0.1 m/s
Detection Time	: 100 ms
Measuring Time Range	: 1-10 minutes (At the detection cycle frequency, measurement can be given)

Air Pressure

Principle	: MEMS Capacitive
Measuring Range	: Between 300 hPa and 1200 hPa
Accuracy	: ± 0.5 hPa
Detection Time	: 100 ms
Measuring Time Range	: 1-10 minutes (At the detection cycle frequency, measurement can be given)

Accessories

10 meters Connection Cable (included)