

EMPURON HARDWARE PARTS

Hardware Parts for EMPURON Solutions

Compact Weather Station WS501-UMB

The compact weather station is used to measure the ambient temperature, relative humidity, solar radiation, barometric pressure, wind direction and wind speed.

It is easy to connect via RS485 Modbus, 2-wire, half-duplex.

Relative humidity is measured by means of a capacitive sensor element, a precision NTC measuring element is used to measure air temperature. Ultrasonic sensor technology is used to take wind measurements.

Technical Data

Dimensions:	Ø approx. 150 mm, height 317 mm
Weight:	approx. 1.5 kg
Interface:	RS485 Modbus, 2-wire, half-duplex
Supply Voltage:	24 VDC ±10%
Power Consumption:	max. 1,83A (heating active)
Operating Temperature Range:	-50 ... 60 ° C
Operating Humidity Range:	0 ... 100 %
Protection Type	
Housing:	IP66

Measurement Range

Temperature:	-50 ... 60 ° C
- Accuracy:	±0.2 ° C otherwise ±0.5 ° C (> -30 ° C)
Relative humidity:	0 ... 100 % RH
- Accuracy:	±2 % RH
Air pressure:	300 ... 1200 hPa
- Accuracy:	+/- 0.5 hPa
Wind direction:	0 ... 359.9 °
- Accuracy:	< 3 ° RMSE >1.0 m/s
Wind speed:	0 ... 75 m/s
- Accuracy:	±0.3 m/s or 3 % (0 ... 35 m/s) RMS whichever is greater ±5 % (> 35 m/s) RMS
Radiation:	
- Response Time:	(95%) < 18s
- Spectral Range:	300 to 1100 nm
- Measuring Range:	1400 W/m ² of reading,

Compact Weather Station WS501-UMB

Integrated design with ventilated radiation protection for measuring:

- Air temperature
- Relative humidity
- Air pressure
- Wind direction
- Wind speed
- Solar radiation

