Compact all-in-one weather sensor from the WS-Series. Measurement of temperature, relative humidity, air pressure, wind direction, wind speed and radiation.

- **Parameters measured**
  Temperature, relative humidity, air pressure, wind direction, wind speed, radiation

- **Measurement technology**
  Ultrasonic/Wind, NTC/T, Capacitive/RH, MEMS capacitive/Pressure, Tiltable Pyranometer Kipp&Zonen/Radiation

- **Product highlights**
  Compact all-in-one weather sensor, tiltable pyranometer, low power, heater, aspirated radiation shield, maintenance-free operation, open communication protocol

- **Interfaces**
  RS485 with supported protocols UMB-Binary, UMB-ASCII, Modbus-RTU, Modbus-ASCII, XDR and optional SDI-12

- **Article number**
  8375.U11

From the WS product family of professional intelligent measurement transducers with digital interface for environmental applications. Integrated design with ventilated radiation protection for measuring: Air temperature, relative humidity, air pressure, wind direction, wind speed and radiation. One external temperature or rain sensor is connectable.

General

Dimensions	Ø approx. 150mm, height approx. 392mm
Weight	Approx. 1.5kg
Interface	RS485, 2-wire, half-duplex
Power supply	4...32 VDC
Operating temperature	-50...60°C
Operating rel. humidity	0...100% RH
Heating	20VA at 24VDC
Cable length	10m
Protection level housing	IP66
Mast mounting suitable for	mast diameter 60 - 76mm

Radiation	
Response time (95%)	< 18 s
Non-stability (change/year)	< 1 %
Non-linearity (0 to 1,000W/m^2)	< 1 %
Directional error (at 80° with 1,000W/m^2)	< 20 W/m^2
Temperature dependence of sensitivity	< 5 % (□10... +40 °C)
Tilt error (at 1000W/m^2)	< 1 %
Spectral range	300...2800 nm
Measuring range	2000 W/m^2
Altitude	0...60 °
Azimuth	-10 °...10 °

Temperature	
Principle	NTC
Measuring range	-50 ... 60 °C
Unit	°C
Accuracy	±0.2°C (-20...50°C), otherwise ±0.5°C (>-30°C)

Relative humidity	
Principle	Capacitive
Measuring range	0 ... 100 % RH
Unit	% RH
Accuracy	±2% RH

Air pressure	
Principle	MEMS capacitive
Measuring range	300 ... 1200 hPa
Unit	hPa
Accuracy	±0.5 hPa (0...40°C)

Wind direction	
Principle	Ultrasonic
Measuring range	0 ... 359.9 °

Unit	°
Accuracy	< 3° RMSE > 1.0m/s

Wind speed	
Principle	Ultrasonic
Measuring range	0 ... 75 m/s
Unit	m/s
Accuracy	±0.3m/s or ±3% (0...35m/s) ±5% (>35m/s) RMS
Resolution	0.1 m/s