Technical Data

Barometric Pressure

Range	600 ... 1100 hPa
Accuracy (for sensor element)	±0.5 hPa at 0 ... +30 °C (+32 ... +86 °F) ±1 hPa at -52 ... +60 °C (-60 ... +140 °F)
Output resolution	0.1 hPa, 10 Pa, 0.001 bar, 0.1 mmHg, 0.01 inHg

Air Temperature

Range	-52 ... +60 °C (-60 ... +140 °F)
Accuracy (for sensor element) at +20 °C (+68 °F)	±0.3 °C (0.17 °F)
Output resolution	0.1 °C (0.1 °F)

Relative Humidity

Range	0 ... 100 %RH
Accuracy (for sensor element)	±3 %RH at 0 ... 90 %RH ±5 %RH at 90 ... 100 %RH
Output resolution	0.1 %RH
PTU Measuring interval	1 ... 3600 s (= 60 min), at one second steps

Precipitation

RAINFALL	Cumulative accumulation after the latest auto or manual reset
Collecting area	0.01 mm (0.001 in)
Output resolution	60 cm^2
Field accuracy for daily Accumulation	Better than 5 %, weather dependent
RAIN DURATION	Counting each 10-second increment whenever droplet detected
Output resolution	10 s
RAIN INTENSITY Range	Running one minute average in 10 second steps. 0 … 200 mm/h (broader range with reduced accuracy)

Inputs and Outputs

Operating voltage	5 ... 32 VDC (absolute values)
Average current consumption	0.1 mA @ 12 VDC (SDI-12 standby)
Typical	3 mA @ 12 VDC (w/default measuring intervals)
Maximum	15 mA @ 5 VDC (with constant measurement of all parameters)
Heating voltage	Options: DC, AC, full-wave rectified AC
Typical ranges	12 VDC ± 20 %, 1.1 A max 24 VDC ± 20 %, 0.6 A max
Digital outputs	SDI-12, RS-232, RS-485, RS-422
Communication protocols	SDI-12 v1.3, ASCII automatic & polled, NMEA 0183 v3.0 with query option

Wind

WIND SPEED	
Range	0 ... 60 m/s
Response time	0.25 s
Available variables	average, maximum, and minimum
Accuracy	±3 % at 10 m/s
Output resolution	0.1 m/s (km/h, mph, knots)
WIND DIRECTION	
Azimuth	0 ... 360°
Response time	0.25 s
Available variables	average, maximum, and minimum
Accuracy	±3.0° at 10 m/s
Output resolution	1°
MEASUREMENT FRAME	
Averaging time	1 ... 3600 s (= 60 min), at 1 s steps, on the basis of samples taken at 4, 2 or 1 Hz rate (configurable)
Update interval	1 ... 3600 s (= 60 min), at 1 s steps

Analog Input Options

Parameter	Element	Range	Input	Excitation	Resolution
Temperature PT1000	Resistor	800 ... 1330 Ω	2 wire 4 wire	2,5 V	16 bits
Solar Radiation K&Z CMP3	Thermopile	0 ... 25 mV	4 MΩ	-	12 bits
Level measurement IRU-9429S	Voltage	0 ... 2,5 V 0 ... 5 V 0 ... 10 V	>10 kΩ	-	12 bits
Tipping Bucket RG13	Frequency	0 ... 100 Hz	18 kΩ	3.5 V	-

Analog mA Output Options

Wind speed	0 … 20 mA or 4 … 20 mA
Wind direction	0 … 20 mA or 4 … 20 mA
Load impedance	200 Ω max

General Conditions

Housing protection class	IP65 (without mounting kit) IP66 (with mounting kit attached)
Temperature	-52 ... +60 °C (-60 ... +140 °F)
Relative humidity	0 ... 100 %RH
Pressure	600 ... 1100 hPa
Wind	0 ... 60 m/s

Additional technical information can be found in the user guide and on www.vaisala.com

VAISALA

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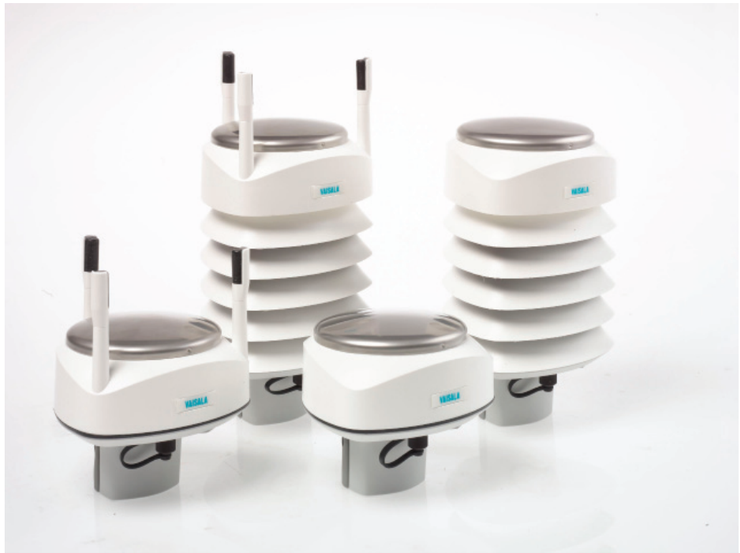
Scan the code for more information

CE

VAISALA www.vaisala.com

Vaisala Weather Transmitter WXT530 Series



Benefits

- Right parameter combination
- Easy to use and integrate
- Weather parameter hub
- Analog sensors can be added
- Compact, light-weight
- Low power consumption
- mA output suitable for industrial applications
- Cost effective

The Vaisala Weather Transmitter WXT530 is a unique series of sensors with parameter combinations that allows you to choose what is right for your application. The WXT530 Series is the flexible, integrated building block for weather applications. The WXT530 Series improves your grip on weather.

Flexibility

The WXT530 is a series of weather instruments that provides six of the most important weather parameters, which are air pressure, temperature, humidity, rainfall, wind speed and direction through various combinations. You can select the transmitter with the needed parameter(s) into your weather application, with a large variety of digital communication modes and wide range of voltages. There is a heated option available. Low power consumption enables solar panel applications. The Vaisala WXT530 Series focuses on maintenance-free operations in a cost effective manner.

Integration

The series offers analog input options for additional third party analog sensors. With the help of the built in analog to digital converters, you can turn the Weather Transmitter WXT530 into a small, cost effective weather parameter hub. Additional parameters include the solar radiation and external temperature sensor. Further, the analog mA output for wind speed and direction enables wide variety of industrial applications. The WXT530 exceeds IEC60945 maritime standard.

Solid Performance

The WXT530 Series has a unique Vaisala solid state sensor technology. To measure wind the ultrasonic Vaisala WINDCAP Sensors are applied to determine horizontal wind speed and direction. Barometric pressure, temperature, and humidity measurements are combined in the PTU module using capacitive measurement for each parameter. This module is easy to change without any contact with the sensors. The precipitation measurement is based on the unique acoustic Vaisala RAINCAP Sensor without flooding, clogging, wetting, and evaporation losses.

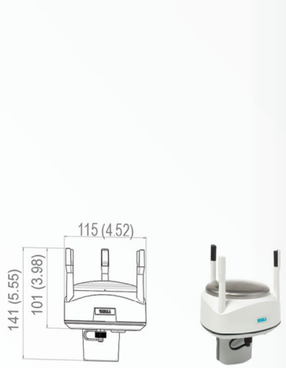
WXT530 Weather Transmitter Series

WXT531

MEASURES:
- Rainfall

WXT532

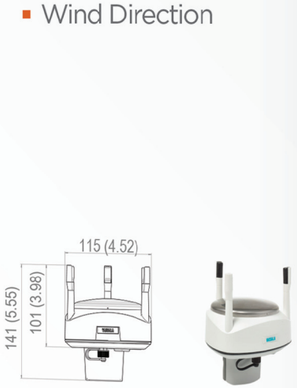
MEASURES:
- Wind Speed
- Wind Direction



mA Outputs

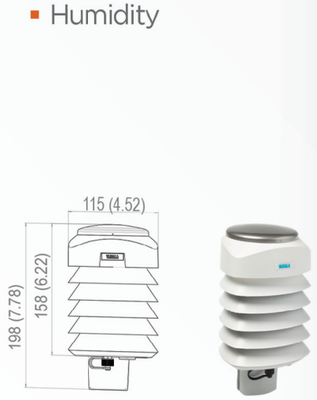
WXT533

MEASURES:
- Rainfall
- Wind Speed
- Wind Direction



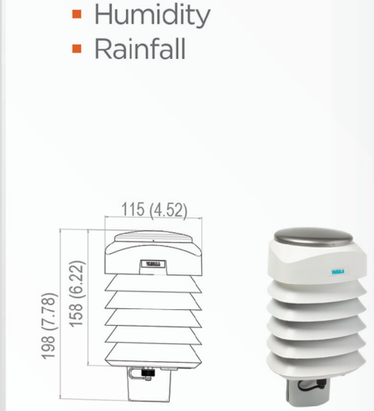
WXT534

MEASURES:
- Air Pressure
- Temperature
- Humidity



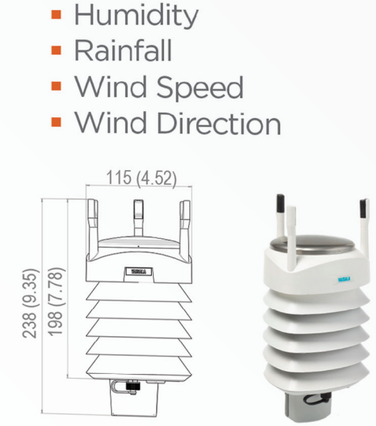
WXT535

MEASURES:
- Air Pressure
- Temperature
- Humidity
- Rainfall



WXT536

MEASURES:
- Air Pressure
- Temperature
- Humidity
- Rainfall
- Wind Speed
- Wind Direction



Analog Inputs