DATASHEET

HANWELL

WEATHER SENSORS

WEATHER MONITORING

The IMC weather sensors provide a range of high performance, compact and economical solutions to weather monitoring for outdoor environments. The Vaisala weather transmitter WXT520 measures barometric pressure, humidity, precipitation, temperature, and wind speed and direction. The sensor uses ultrasound to determine horizontal wind speed and direction and the barometric pressure, temperature, and humidity measurements are combined in the PTU module using capacitive measurement for each parameter.

The sensor is immune to flooding, clogging, wetting and evaporation losses and has the capability of detecting impact or individual rain drops.

Product Features

- Measures 6 most essential weather parameters as WXT510
- Low power consumption - works also with solar panels
- Compact, light-weight
- Easy to install
- No moving parts
- Vaisala Configuration Tool for PC
- USB connection
- Housing with mounting kit IP66
- Applications: weather stations, dense networks, harbors, marinas
- All WXT510's sent to Vaisala for service will be upgraded to WXT520

Benefits

- Enables users to detect change in weather for preventative maintenance
- Reduce potential internal damp caused by drafts and cold spots
- Automatically regulate internal heating based on data
- Eliminate costs relating to delayed internal heating response times

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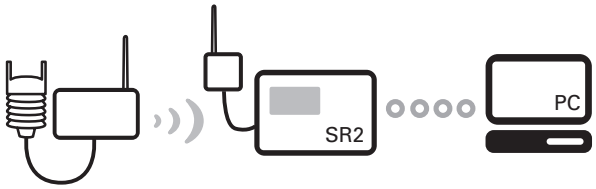
2000-32

Radio transmitter code: RL2000-32-434.075 *(other frequencies are available)*

RL2000-32-434.075 – Weather Transmitter

The RL2000-32 radio transmitter combines all the benefits of the Hanwell wireless technology with the Vaisala weather station transmitter. The weather transmitter measures barometric pressure, humidity, precipitation, temperature and wind speed and direction.

Schematic



RADIO TRANSMITTER FUNCTIONS

Frequency options:	A range of frequencies are available between 433-458MHz. Country specific regulations apply.
Radio power:	10mW
Radio range:	3km over open ground
Software required:	W700 – Standard Synergy Software Package W813 – Legacy RadioLog standard Software Package for Museums W400 – Legacy RadioLog Standard Software Package for Industrial *See Synergy datahseet for further options
Hardware required:	CR2 – Controller SR2 – Smart Receiver REP – Repeater

N.B Instrument operating range -20°C to +60°C in a non-condensing RH environment.

SPECIFICATIONS

Radio Transmitter Specification:

Dimensions:	197 x 106 x 60mm
Weight:	300 grams
Power supply:	External 12V DC
Case material:	ABS
IP Rating:	IP50

Sensor Specification:

Dimensions:	Precision Thermistor
Weight:	650 grams
Operating temperature:	±0.1°C between -10°C to +40°C ±0.3°C Outside these extremes
Housing:	0.1°C

Wind speed

Measurement range:	0…60 m/s
Accuracy:	±3% at 10 m/s

Direction:

Measurement range:	0…360°
Accuracy:	±3°
Response time:	250 ms

Liquid precipitation:

Rainfall:	Cumulative accumulation after latest automatic or manual reset
Output resolution:	0.01mm, 0.001 inches
Accuracy:	5%*
Rainfall duration:	Counting each ten-second increment when droplet detected
Output:	
Rain intensity:	One-minute running average in ten-second steps 0…200mm/h (broader range with reduced accuracy)
Output resolution:	0.1 mm/h, 0.01 inches/h

Barometric pressure:

Measurement range:	600…1100 hPa
Accuracy:	±0.5 hPa at 0…30°C (+32 … +86°F)
Response time:	±1 hPa at -52…+60°C (-60…+140°F)

Air temperature:

Measurement range:	-52…+60°C(-60…+140°F)
Accuracy:	±0.3°C (±0.5°F)

Relative humidity:

Measurement range:	0.100%RH
Accuracy:	±3%RH within 0…90%RH ±5%RH within 90…100%RH

Disclaimer
The information contained herein is believed to be reliable. The IMC Group Ltd is not responsible for any incorrect or incomplete information on this datasheet and the information or product may be changed without notice. Customers should obtain and verify the latest relevant information before placing orders for IMC products.
Version 1

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