METEOROLOGY
HYDROLOGY
ENVIRONMENTAL MONITORING

Combined air temperature and relative humidity sensor (0-1V)

Description

The sensor combines in a single body the air temperature and the relative humidity transducers which makes it compact and cost saving.

The sensor body is made of anodized aluminium corrosion resistant. The protection shield is made of polycarbonate with added glassfiber, material with high resistance to ultraviolet radiation and atmospheric corrosion.

The two transducers are mounted on the top of a support made of plastic material due to minimize heat transfer from the base towards the measure elements.

The sensor body is inserted inside a natural ventilation shield made of a pile of wedge-shaped plates drilled in the middle (so to have space for sensor housing) and air circulation is guaranteed by thermodynamic characteristics of the structure.

The three plates mounted on the top are not drilled in order to protect the transducer from direct and diffuse solar radiation, atmospheric agents as rain, hail and in general dust or dirt contamination.

The humidity sensor is made up of a transducer with hygroscopic polymers. The element is inserted on an electronic circuit giving a voltage signal output proportional to relative humidity.

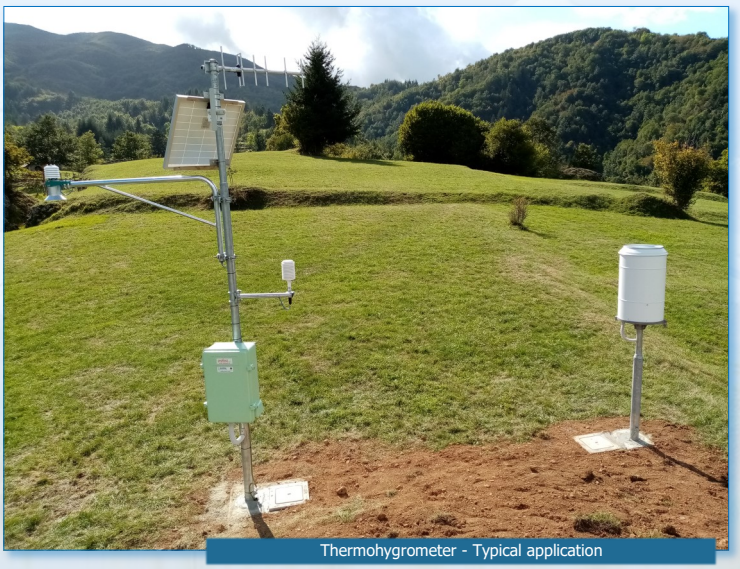
Temperature measurement is done using a Pt 1000 Class A transducer which will transform resistance variations in a voltage signal output proportional to the temperature.

At the bottom of the sensor body there is a waterproof connector for power supply and measurement signal. It's a push pull self latching connector providing security against pull on the cable.

For the installation it's available a support to be fixed with a bracket to masts with external diameter of 50 or 60 mm.

For the calibration of the sensor, a certified instrument is used (reference ACCREDIA). The calibration based on comparison allows to maintain continuity with the metrological chain and assigns a scientific value to the measurement.

Thermohygrometer



Thermohygrometer - Typical application

Technical specifications may be varied without prior notice

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Technical features

GENERAL FEATURES	
Power supply	7 … 30Vdc
Power consumpion	< 1,3mA typ.
Dimensions - Weight	H=310mm D=40mm — 0,6Kg
Operating range	-40 … +80°C
Radiation Shield features	H=190mm D =120mm 0,5 kg
Maitenance	Annual cleaning of the shield
Calibration	Suggested once a year
AIR TEMPERATURE	
Sensor Type	Platinum thermoresistance (Pt1000 DIN A)
Working Principle	Resistance variation
Accuracy	≤±0,2°C (@20°C) ≤±0,5°C under –40°C over +80°C
Resolution	0,1°C
Electrical output	0 … 1V ↔ -40 … +60°C (Standard)
RELATIVE HUMIDITY	
Sensor Type	Hygroscopic polymer
Working Principle	Electrical capacitance variation
Measuring Range	0…100%UR
Accuracy	±2 % (0 … 90%UR) @ 20°C ±3 % (90 … 100%UR) @ 20°C
Resolution	0,1 %UR
Electrical output	0 … 1V ↔ 0 … 100%RH

Ordering code

Combined air temperature and relative humidity sensor with naturally ventilated radiation shield. Output: temperature: 0…1V (-40…+60°C) - relative humidity: 0…1V (0…100%RH)	**FAR032FA**

Le specifiche tecniche possono essere modificate senza preavviso

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