[ε] NSPECTION

Sensori Wireless
IE-WSLR00-THCO2

Wireless Temperature - Humidity - Pressure - CO_2 Probes

The WSLR00THCO2 wireless probe allows to acquire and to centralize the information regarding the temperature, humidity, atmospheric pressure and CO_2 concentration within the environments in which they are installed. The probe utilizes the transmission technology provided by the LoRa® standard, which guarantees wide coverage, without the need for signal repeaters. Today, most of people spend more than 20 hours per day indoors where the CO_2 concentrations are likely to be higher than the levels indicated for their correct and healthy occupation.

CO_2 is a component of the earth's atmosphere (its typical concentration is around 400ppm). Although carbon dioxide is invisible and odorless, an increase in its concentration in closed environments (increase simply due to human presence) leads to a greater fatigue and a reduction of concentration for the people present. A limit value commonly accepted for living spaces is 1500ppm. By way of comparison, consider that in an unventilated bedroom or even in a full classroom concentration values can be measured which are often triple (up to 5,000 ppm).
The probe is powered by two 3.6V (C, 8500 mAh) lithium battery (Li-SOCl2), replaceable by the user, which typically guarantees 4 years of autonomy. Battery autonomy depends on the distance from the receiver and on the settings of the acquisition intervals of both the sensors and the transmission. All devices can be configurable for Data Logger functionality, i.e. they are capable to store, at configurable intervals, the acquired measurements. The data is saved on the internal Data Flash which can hold 500,000 records. Data Logger functionality is always available on the receiver.

IE-WSLR00THCO2
Temperature, humidity, atmospheric pressure and CO2 concentration (0-2000ppm) radio probe.
IE-WSLR00THCO2-5
Temperature, humidity, atmospheric pressure and CO2 concentration (0-5000ppm) radio probe (only upon request).

The user interface consists exclusively of LED signals and a Reed contact, but thanks to a PC application with a Wireless LoRa USB key it is possible to enter into the configuration of the device (even remotely).

Technical Data Sheet

General information	
User interface	Activation Reed - Information LED
Antenna	Helical integrated (gain 2.4 dB)
Mounting	Wall mounted with bottom plate

Mechanical	
Operational temperature limit	-30 … +60 (°C)
Storage temperature limit	-40 … +70 (°C)
Module container Class	IP30
Container material	ABS self-extinguishing UL 94 VO
Weight	155 (g)
Dimensions	120 x 80 x 33,5 (mm)

Electrical	
Power supply	2 Li-SOCl2 type C battery (3.6 V, 8500 mAh)
Battery life 1	Typical (with acquisition and transmission every 30 minutes): More than 4 years7 anni in modalità
Transmission frequency	ISM band 868 Mhz
Transmission power	From 2.5 to 25 mW (Automatically adjusted)
Outdoor distance	10 (Km) on sight
CO2 measurement range	IE-WSLR00THCO2: 0 – 2000 ppm | IE-WSLR00THCO2-5: 0 – 5000 ppm
CO2 measurement accuracy	IE-WSLR00THCO2: ±(50ppm + 2% vm) | IE-WSLR00THCO2-5: ±(50ppm + 3% vm)
Temperature measurement range	-40 … +60 (°C)
Temperature measurement accuracy	±0,5°C tra -40° … +60°
Humidity measurement range	0% - 95% RH
Humidity measurement accuracy	± 3% dal 0% a 95%
Atm. pressure measurement range	700 … 1100mbar
Atm. pressure measurement accuracy	± 2 mbar (20 .. 80% RH)
Transducer type	Dual wavelength NDIR technology
Front degree of protection	IP30
Rear degree of protection	IP30
Radio disturbances	EN 61000-6 EN 55024:2010-11
Construction standards	CEI

Connectivity	
Wireless - Local	Available for the connection with the configuration and data management software