ELECTREX
the energy saving technology

Engineered and manufactured in Italy
Made in Italy
Pensato, progettato e prodotto in Italia
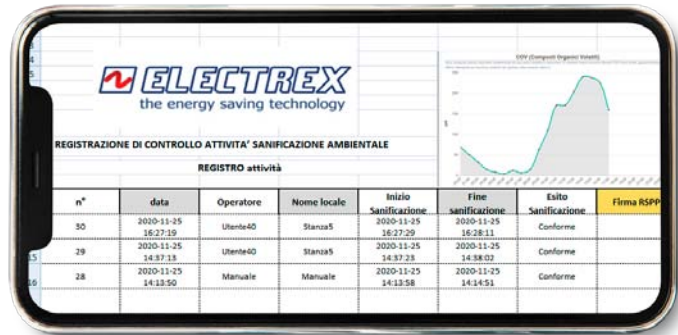
LOW ENERGY CONSUMPTION

Electrex Sensing & Sani Solutions

AirQ SANI ⁰³

The **Electrex Sensing & Sani Solutions** allow the **sanitization of environments and surfaces using Ozone** and also the **monitoring of environmental parameters**. The same device is able to create **alerts / alarms** (E-mail, Telegram) and **interconnect** with sanitation **systems** and **HVAC** systems (API, MQTT) **optimizing energy consumption**.

AirQ SANI ⁰³ includes, in an elegant case, an advanced system for measuring and sanitizing environments, surfaces and objects through the production of Ozone.

Thanks to an advanced calendar, the **Wi-Fi Web Data Manager technology** (IEEE 802.11b / g / n) allows the **programming of activation times and the local recording of the sanitization processes**, all through smartphone, tablet and PC using the **embedded web interface**.

AirQ SANI ⁰³ OZONE generator

OZONE production	10.000 mg/h

AirQ SANI ⁰³ is an advanced system for measuring and sanitizing environments, surfaces and objects through the production of Ozone. It is equipped with a powerful 10,000 mg/h OZONE generator supplied by two ceramic plates in which an electric discharge transforms the oxygen molecules present in the air into ozone molecules; therefore it does not require product refills. It is simple and intuitive and can be used/configured both manually and remotely via customized web pages visible from smartphones, tablets and PCs.

OZONE is a gas that thanks to its oxidative power sanitizes, sanitizes and deodorizes the air, surfaces and objects in all environments, eliminating germs, bacteria, viruses, spores, fungi, formaldehyde and smells of smoke, food and animals.

The time required to sanitize the premises is programmable and depends on their size and the type and concentration of pollutants. The ozone saturation sanitation also creates a subsequent temporary barrier effect against pollutants.

After sanitizing, wait before entering the room (the ozone molecules are unstable and turn into normal oxygen spontaneously) then open the windows before staying there. In any case, never stop in the ozonated environment if you still smell the ozone.

Like all sanitizing and disinfectant treatments, sanitation also lasts until external events significantly change the level of pollution of the environment.

AirQ SANI ⁰³ Measures

AirQ SANI ⁰³ integrates sensors capable of measuring various key parameters indicating the level of healthiness of the environment:

- Volatile Organic Compounds (VOC)
- CO_2 equivalent (CO2e)
- Temperature (T), Relative Humidity (RH) and Atmospheric Pressure (Pa)

Optional monitoring of Ozone (O3) and Particulate Matter (PM).

Parameters	Type[1]	Range	Accuracy
Volatile Organic Compounds [TVOC[2]]	TVOC inst	0 .. 60.000ppb	Dependent on gas types and particle concentration
	TVOC avg		
	TVOC min		
	TVOC max		
Carbon Dioxide Equivalent [CO$_2$e]	CO$_2$e inst	400 .. 60.000ppb	Dependent on gas types and particle concentration
	CO$_2$e avg		
	CO$_2$e min		
	CO$_2$e max		
Temperature [T]	T inst	-20°C .. +80°C	± 0,2°C
	T avg		
	T min		
	T max		
Relative humidity [RH]	RH inst	0 .. 100%	± 1,5% RH
	RH avg		
	RH max		
	RH min		
Atmospheric pressure [AP]	AP inst	200 .. 1.100mbar	Typical ± 4mbar
	AP avg		
	AP max		
	AP min		

[1] The instantaneous measurements refer to every second. The averages (integral of the quarter of an hour), the minimums and maximums can be seen from the embedded standard web pages.

[2] TVOC stands for Total VOC and is measured in 'parts per billion' (ppb). For a correct measurement, the sensor must have been active for at least 12 hours.

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AirQ SANI O3 Advanced features

AirQ SANI O3 allows you to monitor the effectiveness of the sanitation process by checking the situation both before, during and after treatment. The storage of all parameters including those of the Ozone generator takes place inside the device and is available for viewing on **dashboards / graphs** that can be consulted via smartphone, tablet and PC.

It is also possible to activate advanced functions such as creating **alerts / alarms** (E-mail, Telegram), **interconnecting** (API, MQTT) with **HVAC** (Heating, Ventilation and Air Conditioning) systems and systems, **optimizing energy consumption**.

AirQ SANI O3 Solution example

The **AirQ SANI O3** devices can be networked with the **AirQPro** devices for a complete solution of sanitation, monitoring and management of indoor air quality (even for large buildings, Retail, Horeca, Offices, etc.).
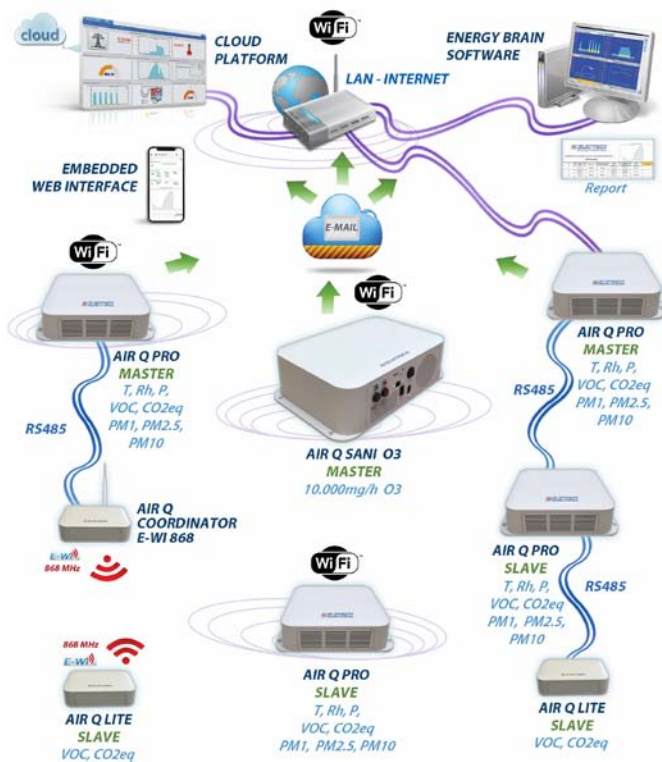
In the example there is an AirQ SANI O3 that implements the sanitation of the rooms and is networked with other AirQPro and AirQLite devices inserted in different rooms for monitoring the local air quality. The devices are connected to each other both via Wi-Fi and Ethernet cable but also using a 868MHz radio communication via the Deca Coordinator E-Wi 868. **For further information on Electrex networks and their advanced and innovative functions, refer to the website www.electrex.it** .

AirQ SANI O3 Specifications

O3 production: 10,000 mg/h

Fan: 69 m3/h

Manual function: On button and OFF button
- Press and hold the ON button for 3 seconds
- Default Continuous Cycle of 5 minutes and then fan only for the time necessary to transform O3 into O2
- Editable from the configuration web page

Automatic Functionality: from customized Web Pages
- Configure the m2 of the room (calculated height ⩽ 3m)
- Automatically defines the time
- Allows to program the operating time calendar

The lighting of a green LED gives an indication of the end of the cycle (sanitization + decay time).

Connectors: RJ45 for Ethernet network, terminal block for RS485 network and 12Vdc output

Communication: Wi-Fi and Wi-Fi AP, Ethernet, RS485 Slave and E-Wi 868MHz via a Deca Coordinator RS485 E-Wi 868.

Equipped with power switch with incorporated LED

Power supply 230Vac ± 10% 50Hz

Power max: 90 W

Case color: White

Dimensions mm (L1 [W2] xHxP): 350.5 [320] x 100 x 225.5

Net weight: 2.2 Kg

Low Noise: <= 54dB

WARNING: DO NOT USE IN THE PRESENCE OF PEOPLE AND ANIMALS as the high concentrations of ozone can cause obvious irritation to the throat and eyes, up to slight dizziness which passes quickly by turning off the appliance and moving away from the room.

AirQ SANI O3 Standards

Complies with EMC Directives 2014/30/EU, 2014/35/EU

AirQ SANI O3 Packaging

The package contains:
- 1 AirQ SANI O3
- 1 power supply cable
- 1 Instruction booklet

Ordering codes

Type	Code
AirQ SANI O3	*PFATH2JS02W*
AirQ Pro	*PFATJ3J-04W*
AirQ Lite 868	*PFATM1I-04W*
AirQ Lite RS485..	*PFATM11-04W*
AirQ Coordinator RS485 E-Wi 868 12Vdc	*PFATM0IL04W*

Distributor

ELECTREX the energy saving technology

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www.electrex.it - email: info@electrex.it

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Electrex Sensing & Sani Solutions

Electrex Sensing Solutions

The **Electrex Sensing Solutions** allow to **monitor key environmental parameters** with the ability to create **alerts/alarms** (E-mail, Telegram), **interconnect** (API, MQTT) with **sanitation systems and HVAC** (Heating, Ventilation and Air Conditioning) systems, **optimizing energy consumption**. **AirQ^Pro** is the main device and is an integrated system for monitoring and managing Indoor Air Quality.

AirQ PRO

AirQ^Pro measurements

AirQ^Pro monitors the key parameters that allow a simple and sustainable management of the **environmental conditions in a building**:
- Volatile Organic Compounds (VOC)
- CO2 equivalent (CO2e)
- Particulate matter (PM1, PM2.5, PM10)
- Temperature (T), Relative Humidity (RH) and Atmospheric Pressure (Pa).

Other parameters on request e.g. PM4, Ozone (O3) or ultraviolet radiation (UV-A, UV-B, UV-C).

Parameters	Type[1]	Range	Accuracy
Volatile Organic Compounds [TVOC[2]]	TVOC inst	0 .. 60.000ppb	Dependent on gas types and particle concentration
	TVOC avg		
	TVOC min		
	TVOC max		
Carbon Dioxide Equivalent [CO₂e]	CO₂e inst	400 .. 60.000ppb	Dependent on gas types and particle concentration
	CO₂e avg		
	CO₂e min		
	CO₂e max		
PM1 PM2,5 PM10	PM inst	0 .. 1.000µg/m³	± 10% between 0-40°C
	PM avg		
	PM min		
	PM max		
Temperature [T]	T inst	-20°C .. +80°C	± 0,2°C
	T media		
	T min		
	T max		
Relative Humidity [RH]	RH inst	0 .. 100%	± 1,5% RH
	RH avg		
	RH max		
	RH min		
Atmospheric pressure [AP]	AP inst	200 .. 1.100mbar	Typical ± 4mbar
	AP avg		
	AP max		
	AP min		

[1]The instantaneous measurements refer to every second. The averages (integral of the quarter of an hour), the minimums and maximums can be seen from the embedded standard web pages.

[2]TVOC stands for Total VOC and is measured in 'parts per billion' (ppb). For a correct measurement, the sensor must have been active for at least 12 hours.

AirQ^Pro user interface

The measurements and historical data are available on **dashboards and graphics** accessible through smart - phones, tablets and PCs.

AirQ^Pro configuration

AirQ^Pro can be configured as **Master or Slave** allowing you to create networks composed of several **AirQ** units. The connection can be both wired (**Ethernet and RS485 serial**) and wireless (**Wi-Fi and 868MHz** via a **AirQ Coordinator RS485 E-Wi 868**). See network example.

AirQ^Pro Specifications

Connectors: RJ45 for Ethernet network, terminal block for RS485 network and 220cm long wire for the power supply.

Communication: Wi-Fi and Wi-Fi AP, Ethernet, RS485 Slave and E-Wi 868MHz via a Deca Coordinator RS485 E-Wi 868.

Included in the package: external 12Vdc power supply.

Low Consumption: 4.7 W

Case color: White

Dimensions mm (L1 [W2] xHxP): 230.5 [200] x 60 x 200.5

Net Weight: 0.760kg (device) and 80g (12Vdc power supply)

AirQ^Pro Standards

Complies with EMC Directives 2014/30/EU, 2014/35/E

AirQ^Pro Packaging

The package contains:
- 1 AirQ^Pro
- 1 12Vdc power supply
- 1 Instruction booklet

Ordering codes

Type	Code
AirQ SANI O3 ....PFATH2JS02W	
AirQ Pro PFATJ3J-04W	
AirQ Lite 868 .... PFATM1I-04W	
AirQ Lite RS485.. PFATM11-04W	
AirQ Coordinator RS485 E-Wi 868 12Vdc PFATM0IL04W	

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AirQ[Lite] RS485 and AirQ[Lite] 868

AirQ[Lite] is instead a Slave of **AirQPro** and measures:
- Volatile Organic Compounds (VOC)
- CO2 equivalent (CO2e)

AirQ[Lite]

Parameters	Type[1]		Range	Accuracy
Volatile Organic Compounds [TVOC[2]]	TVOC inst		0 .. 60.000ppb	Dependent on gas types and particle concentration
	TVOC avg			
	TVOC min			
	TVOC max			
Carbon Dioxide Equivalent [CO2e]	CO2e inst		400 .. 60.000ppb	Dependent on gas types and particle concentration
	CO2e avg			
	CO2e min			
	CO2e max			

[1]The instantaneous measurements refer to every second. The averages (integral of the quarter of an hour), the minimums and maximums can be seen from the embedded standard web pages.

[2]TVOC stands for Total VOC and is measured in 'parts per billion' (ppb). For a correct measurement, the sensor must have been active for at least 12 hours.

AirQ[Lite] configurations

The **AirQ[Lite]** can be inserted into a network as a slave of a **AirQ[Pro]** using an RS485 serial connection (**AirQ[Lite] RS485**) and/or wireless 868MHz (**AirQ[Lite] E-Wi 868)** via a **AirQ Coordinator RS485 E-Wi 868** to be connected in RS485 to the **AirQ[Pro]**. See network example.

AirQ[Lite] Specifications

AirQ[Lite] RS485 *terminal block for RS485 network and female jack for 12Vdc power supply*

AirQ[Lite] E-Wi 868 *wireless communication at 868MHz via a AirQ Coordinator RS485 E-Wi 868.*

Included in the package: external 12Vdc power supply.

Low Consumption:< 3 W

Case color: White

Dimensions mm (L1[L2]xHxP): xxx [125] x 40 x 85

Weight: 0.760kg (device) and 80g (12Vdc power supply)

AirQ[Lite] Standards

Complies with EMC Directives 2014/30/EU, 2014/35/E

AirQ[Lite] Packaging

The package contains:
- 1 AirQ[Lite]
- 1 12Vdc power supply
- 1 Instruction booklet

AirQ Coordinator RS485 E-Wi 868

The **AirQ Coordinator RS485 E-Wi 868 12Vdc** is a device that can be connected in the RS485 subnet to a Gateway datalogger such as the AirQPro and / or the AirQ SANI [O3]. It performs the function of coordinator of the radio network on the 868MHz frequency (Wireless) managing 'end devices' such as the **AirQ[Lite] E-Wi 868** that transmit TVOC and CO2e measurements via radio at 868MHz using the E-Wi protocol. See network example.

AirQ Coordinator E-Wi 868

AirQ Coordinator E-Wi 868 specifications

868MHz radio reception-transmission with E-Wi protocol:
  Speed: 19,200 bps
    Transmission: up to 14 dBm
    Reception: -109 dBM
External antenna
Terminal: block with 5 screw terminals, three of which galvanically isolated for the RS485 port and two for the 12Vdc power supply (powered by the external power supply)
Terminals: .... screw terminals (for power supply and RS485)
Maximum cable section: 1 mm2
Absorption: .... ≤ 1VA
Operating temperature:.. -10 / + 60 ° C
Relative humidity: .... 95% non condensing
Degree of protection: IP40 on the front, IP20 on the terminal side
Wall mounting or placed on a horizontal surface
Black or white container in self-extinguishing ABS UL 94 V0
Dimensions (w x h x d): .... 125 x 40 x 85 mm

Standards

Safety ....IEC EN 61010-1
E.M.C...EN 301489-1 and -3
RF spectrum efficiency ....EN 300 220-2 v.2.3.1

AirQ Coordinator Packaging

The package contains:
- 1 AirQ Coordinat**or** RS485 E-Wi 868 12Vdc
- 1 12Vdc power supply
- 1 Instruction booklet

Ordering codes

Type	Code
AirQ SANI O3 ....PFATH2JS02W	
AirQ Pro PFATJ3J-04W	
AirQ Lite 868 .... PFATM1I-04W	
AirQ Lite RS485... PFATM11-04W	
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