NE-KIT430

NEMo XT - Monitoring

Formaldehyde - CO$_2$ - LVOC - Temperature - Humidity - Pressure

NEMo XT is the first indoor air quality (IAQ) measuring station to continuously measure containment and formaldehyde with the required IAQ performance levels.

As it is designed for permanent installation, it is usually powered by electricity. However in the standard configuration, it can run on battery for 1 year. Compatible with IoT or local networks, it is easy to install NEMo XT in any type of building.

Wall-mounted tablet for displaying live data

Cloud solution with alerts management

Applications

◆ Monitoring working environment near production sites and in offices

◆ Monitoring air quality in energy-efficient buildings (WELL certificate-mandatory).

◆ Optimising ventilation system

◆ Indoor Air Quality Monitoring in public buildings

◆ Helping improve the efficiency of filtration system

Advantages

◆ Able to measure real expore level to pollutants and identify pollution peaks

◆ Possible to integrate additional PID sensor for TVOC for industry monitoring

◆ Exclusive and patented technology for continuous measurement of formaldehyde for formol users

◆ Modular and upgradable, possible to integrate additional sensors (PM 1 / 2.5 / 10, TVOC, Radon...)

◆ Connected device for real-time access to measurement results (via Sigfox, LoRa, Bluetooth, Modbus RS485, LTE...)

◆ User-friendly data management software, Cloud interface and mobile application

◆ Compliant with WELL Certificate Building Standard label

Public Buildings	Industries	Green Buildings

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Measurement devices

FORMALDEHYDE

Detection method	Optical reading of nanoporous material (Ethera patented technology)
Measuring range	0 - 2800 ppb (0 - 3444 µg/m³)
Sensitivity	Down to 1 ppb
Sampling method	Passive diffusion
Comparison with DNPH* reference method	< 13 %
Storage condition for cartridge	Storage before use: 24 months from the manufacturing date. Store between 2 and 8°C
Interference	No known significant interference

CO₂/CONFINEMENT

Detection method	Non Dispersive Infrared spectrometry (NDIR)
Measuring range	0 to 5000 ppm
Resolution	1 ppm
Accuracy	± 50 ppm ± 3% of reading value
Response time 90%	< 30 seconds

LVOC (Light Volatile Organic Compounds)

Detection method	Electrochemical
Measuring range	30 ppb to 5 ppm
Resolution	1 ppb
Accuracy	±40 ppb
Response time 90%	< 30 seconds
Definition	Compounds containing up to 4 carbon atoms (aldehydes, alcohols, etc.)

TEMPERATURE

Type of sensor	CMOS
Measuring range	-55°C to +125°C
Resolution	0.08°C
Accuracy	± 2°C between -25°C and 100°C (±0.5°C after calibration)

HUMIDITY

Type of sensor	Capacitive
Measuring range	0 to 95 %
Resolution	0.08 %
Accuracy	± 3% between 11% and 89% (± 7 % for the rest of the range)

PRESSURE

Type of sensor	CMOS
Measuring range	260 to 1260 hPa
Resolution	± 0.02 hPa
Accuracy	± 2 hPa

GENERAL SPECIFICATIONS

Sampling interval	10 minutes (customisable) for CO₂, T, P, RH, LVOC; 2 hours for formaldehyde
Conditions of use	Temperature between 0°C and +30°C. Humidity between 30 and 70 %
Approx. dimensions (L x l x h) / Total weight	190 x 135 x 70 mm / 520 grams
Power supply and autonomy	• Lithium battery 3.6V - 17Ah (type D with connector), autonomy up to 1 year with measurements every 10 minutes and standard configuration • Power supply (DC 5V - 1A) mandatory when adding new parameters or integrating additional cards
Display	LED indicator and NEMo Cloud web interface
Data communication	Connection to PC via MicroUSB or to smartphone via mobile application NEMo View Connecting to Cloud via Sigfox or LoRa as well as other possibilities (Modbus, LTE, etc.)
System requirements	Operating system: Windows 7 or higher, Mac OS 10.9 or higher
Warranty	2 years excluding consumables
Conformity	FR D2015-1000 for confinement (CO₂) and formaldehyde FR D2012-14 for confinement (CO₂) WELL Building Standard - element 18
Contents	1 wall-mounted station 1 5V power supply 1 user guide 1 calibration set Ref. 094 for NEMo

RELATED PRODUCTS	REFERENCE	QUANTITY
Box of 5 formaldehyde cartridges for NEMo or NEMo XT	NE-FOR011	1
Box of 25 formaldehyde cartridges for NEMo or NEMo XT	NE-FOR012	1
Additional Card Particulate Matter (PM 1 / 2.5 / 4 / 10)	NE-COP250	1
Additional Card TVOC (PID) for NEMo or NEMo XT	NE-COP040	1
Other additional cards: NO₂, NO, O₃, CO, NH₃, SO₂, H₂S...	[various]	1
Annual subscription to NEMo Cloud	NE-CLO030 / NE-CLO040	1
Additional Subscription to Sigfox	NE-CLO050	1
Additional Subscription to LoRa	NE-CLO110	1
Additional Subscription to GSM service	NE-CLO060	1
NEMo XT - Annual Preventive Maintenance	NE-MAI090	1
NEMo Cartridge Container Pack	NE-ENT011	1
Communication Module Modbus for NEMo XT, XT Mini and Outdoor	NE-COP160	1

NE-KIT470

NEMo XT *Mini*

CO₂ - Particulate Matter - LVOC - Light - Temperature - Humidity - Pressure

Staff costs could represent up to 92% of the total costs of commercial buildings*! Providing an optical Quality of Working Life shows the company's commitment in implementing a much-appreciated Corporate Social Responsibility (CSR) system, improving employees' performances thus reducing employee-related costs.

NEMo Building is a monitoring station specially designed for Smart and Green buildings.

It integrates all the parameters of Quality of Working Life in one station: comfort (temperature and humidity); well-being (light, noise) and Indoor Air Quality – health (CO_2, VOC and particulate matter).

With a reasonable price and compatible with IoT platforms (Sigfox, LoRa, LTE cat M1) or local networks (Modbus), it's easy to set the station up in all kinds of buildings in large numbers, in order to collect all the information that is necessary for smart building management (HVAC system, blinds and windows, lighting management...).

Thanks to their experience in professional measuring and indoor air quality, Ethera is now able to meet the requirements from building managers by ensuring a high quality of measurement and the stability of their devices over time.

Applications

◆ Monitoring air quality and well being-related parameters in Smart and Green buildings
◆ Monitoring air quality in energy-efficient buildings (WELL certificate-mandatory).
◆ Optimising ventilation system
◆ Indoor Air Quality Monitoring in public buildings
◆ Helping improve the efficiency of filtration system

Advantages

◆ Able to monitor all the health-related parameters
◆ Easy to deploy in the whole building with low-cost solution
◆ Real-time measuring with the connected device (Sigfox, LoRa, Bluetooth, LTE-M, Modbus)
◆ Compatible with most Building Management Systems on the market
◆ User-friendly data management software, Cloud interface and mobile application
◆ Compliant with WELL Certificate Building Standard label

*According to WELL Building Standard

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Measurement devices