



Dräger X-node Wireless toxic gas monitoring system

Dräger X-node is a battery powered toxic gas monitoring solution for continuous ambient air monitoring and analysis. It uses LoRaWAN technology to continuously monitor an area for up to 12 months per charge. X-node transmits gas concentration, temperature, humidity, and pressure to a Bluetooth® app and the cloud for data visualization.

Benefits

Flexible and easy to use

The Dräger X-node IoT solution helps you to avoid damage, optimize production processes and prevent loss of resources - regardless of whether you want to use Dräger X-node or individual components of it in the long or short term:

- Transparency: to help make better, data-driven decisions
- Monitoring; with the help of information-driven attention
- Documentation: through traceability and verifiability of measured values

X-node devices do not require a cable for data transmission or power supply. A rechargeable, lithium-polymer battery powers the transmitter for up to 12 months and provides flexibility for rapid positioning in a variety of locations. And, with an IP65 rating, the X-node Device is protected against dust and high-pressure jets, so it can be used indoors and outdoors. A clearly visible, all-round green/yellow/blue/red LED indicator on the X-node device continuously shows its status: operation, malfunction, and 2 alarm levels.

Industry-proven sensor technology

Choose from over 20 different, reliable DrägerSensors (see below) and let the X-node device continuously monitor the concentration of a specific gas and simultaneously measure temperature, relative humidity and air pressure. DrägerSensors are renowned for their fast response time, high accuracy, great stability and long service life. They can be simply fitted into the measuring head without tools, using plug-and-play.

Control via the X-node app

You can access the X-node device via Bluetooth® using the X-node app to, for example, configure limit values, set sensors or display the current measured values. The X-node app is available free of charge in the Google Playstore and Apple App Store.

Analyze with the X-node Hub

The Dräger X-node Hub is a subscription-based cloud application. With the X-node Hub online dashboard, you can conveniently view and manage measured values, online from anywhere. A variety of functions support you in monitoring and analyzing your processes, for example:

- status overview of all your X-node devices on a map
- datalogger, individually adjustable visualization of the measurement data
- email notifications (ad-hoc messages and interval reports)
- event logger with alarm history
- display device's geolocation
- tags for flexible organization of your devices
- download measurement data

The Dräger X-node uses a LoRa network to transmit the measured data (gas concentration, ambient temperature, air pressure and humidity) encrypted to a cloud. An internet connected LoRaWAN gateway is required for receiving X-node data and transmitting it to the X-node Hub cloud.

Dräger X-node system



D-12.669-2023

The IoT solution supports you not only in preventing damage, but also in optimizing production processes or the loss of resources.

Accessories



D-6606-2011

DrägerSensor EC

Fast response, high accuracy, great stability, long life. Electrochemical DrägerSensors offer all these benefits. You can use the robust and long-life sensors for the selective measurement of the smallest concentrations of toxic gases and oxygen in ambient air.

Related Products

D-11803-2016



Dräger Polytron 6100

The Dräger Polytron 6100 EC WL is a wireless transmitter for continuous monitoring of toxic gases and oxygen. The intrinsically safe and SIL2-rated transmitter features completely wireless signal transmission using either ISA100 or Wireless HART and with battery or 24 VDC wired power supply. The internal battery pack allows the transmitter to operate continuously for up to 24 months making the Polytron 6100 a flexible and cost-efficient solution for plant expansions, upgrades or new installations.

D-15316-2023



Dräger PointGard 3100

The Dräger PointGard 3100 is a complete 1-channel gas detection system for detecting toxic gases or oxygen in ambient air. The robust yet compact IP66 housing already contains all necessary alarm equipment.

2-925-91



Dräger X-zone 5800

State-of-the-art area monitoring: the Dräger X-zone® 5800 in combination with the Dräger X-am® 5000, 5100, and 5600 gas detectors can be used for the measurement of up to six gases. The internal pump and continuous power supply in the explosive area of Zone 0 / C1D1 extend the range of applications in mobile gas detection technology.

Technical Data

Dräger X-node

Automation	Information via X-node Hub and X-node app
Measuring gases	Oxygen and toxic gases such as Cl ₂ , CO, CO ₂ , H ₂ , H ₂ O ₂ , H ₂ S, NH ₃ , NO, NO ₂ , O ₃
Measuring ranges	See sensor data sheet
Memory function	Real time clock with backup
	Datalogger: 1 week on X-node; 6 months in X-node Hub

Electrical data

Battery type	Lithium polymer battery, rechargeable
Battery life	Up to 12 months
Operating voltage	3.6 V
Alarm	Discrete notification via X-node Device, X-node Hub
Display	3-colour LED
Interface	BLE and LoRa 915 MHz

Radio

Transmission Range	Approx. 2 miles outdoors
Max. radiated power:	Bluetooth® LE: <= 20 dBm EIRP LoRa: <= 8.75 dBm EIRP
Operating frequency:	Bluetooth® LE: 2402 – 2480 MHz LoRa (US): 915 MHz

Housing

Housing material	Polycarbonate
Protection class	IP65
Dimension	Ca. 170 x 90 mm (6.9" x 3.5")
Weight	Ca. 300 g (0.66 lbs)

Environmental conditions

Temperature	-20 °C to +50 °C (-4 °F to 122 °F)
Humidity	5 % to 95 % r.h.
Pressure	700 hPa to 1300 hPa

Approval

Electrical Safety	CE
Radio and Telecommunications Directive	EN 300 328 V2.2.2
This device complies with Part 15 of the FCC Rules	EN 300 220-1 V3.1.1
	EN 300 220-2 V3.1.1
	EN 62311:2008
	EN 62368-1:2014
	EN 50270: 2015 Susceptibility type 2
	EN 301 489-1 V2.2.3
	EN 6100-6-3:2007 + A1:2011
RoHS	EN IEC 63000:201

Ordering Information

Dräger X-node Transmitter

Dräger X-node Transmitter US902-928	5601026
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Dräger X-node Hub

X-node Hub cloud service configurator	3711807
X-node Hub Basic (per month)	3732056
X-node Hub Pro (per month)	3732057
X-node Hub Premium (per month)	3733058
LoRaWAN indoor gateway with LTE & Ethernet	NA11493
LoRaWAN outdoor gateway with LTE & Ethernet	NA11494

Sensor

DrägerSensor® AC	0 - 30 ppm	6810595
DrägerSensor® Cl ₂	0 - 100 ppm	6809665
DrägerSensor® CO	0 - 1,000 ppm	6809605
DrägerSensor® CO ₂	0 - 10,000 ppm	6800482
DrägerSensor® CO LS	0 - 5,000 ppm	6809620
DrägerSensor® H ₂	0 - 3,000 ppm	6809685
DrägerSensor® H ₂ O ₂ HC	0 - 7,000 ppm	6809675
DrägerSensor® H ₂ O ₂ LC	0 - 300 ppm	6809705
DrägerSensor® H ₂ S HC	0 - 1,000 ppm	6809710
DrägerSensor® H ₂ S LC	0 - 100 ppm	6809610
DrägerSensor® HCl	0 - 100 ppm	6809640
DrägerSensor® HCN LC	0 - 50 ppm	6813200
DrägerSensor® Hydride SC	0 - 1 ppm	6809980
DrägerSensor® NH ₃ FL	0 - 300 ppm	6813260
DrägerSensor® NH ₃ TL	0 - 300 ppm	6813095
DrägerSensor® NO	0 - 200 ppm	6809625
DrägerSensor® NO ₂ LC	0 - 20 ppm	6813205
DrägerSensor® O ₂ LS	0 - 25 Vol%	6809630
DrägerSensor® O ₃	0 - 5 ppm	6814005
DrägerSensor® OV ₁	0 - 100 ppm	6810740
DrägerSensor® OV ₂	0 - 100 ppm	6810745
DrägerSensor® PH ₃ AsH ₃	0 - 10 ppm	6809695
DrägerSensor® SO ₂	0 - 100 ppm	6809660

Ordering Information

Accessories

AC sensor refill kit (4 bottles)	6809381
Calibration adapter FKM	6810536
Splash guard	6812510

ETA Process Instrumentation

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