

# Dräger X-node Gas and ambient conditions monitoring

Dräger X-node is a wireless IoT solution for process monitoring and analysis. The system solution converts reliable measurement data - gas concentration, temperature, humidity and pressure - from the X-node device into valuable information that you can access, analyse, visualise, monitor and store online via the X-node Hub.



### **Benefits**

### Flexible and easy to use

The Dräger X-node IoT solution helps you to avoid damage, optimise 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 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 LED indicator on the X-node device continuously shows its status: operation, malfunction, limit value violation.

### Industry-proven sensor technology

Choose from over 15 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.

### Analyse with the X-node Hub

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 analysing your processes, for example:

- status overview of all your X-node devices
- detailed, individually adjustable visualisation of the measurement data
- email notifications (ad-hoc messages and interval reports)
- limit value violation list
- display device's geolocation
- tags for flexible organisation 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. The X-node Hub is your flexible data-management system that allows you to conveniently process and analyse the data from individual or multiple X-node devices.

### Dräger X-node system



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

# **Related Products**



### Dräger Polytron® A500

The Dräger Polytron® A500 is a transmitter for long-term measurement of ammonia in high humidity. The heated convection cap protects the electrochemical DrägerSensor®  $NH_3$  FL against external influences and ensures a continuous  $NH_3$  measurement under the special conditions of air scrubbers.

## **Related Products**



### Dräger Polytron® C300

The Dräger Polytron® C300 is a sensing head specifically designed for permanently capturing the ammonia concentration in livestock environments. The integrated DrägerSensor® NH<sub>3</sub>-AL is the only electrochemical sensor for continuous long-term ammonia measurement under the harsh conditions in animal houses.



### **Dräger Sampling Tubes and Systems**

The Dräger Sampling Tubes and Systems are very reliable in use even with complex compounds and mixtures of substances.

# **Technical Data**

### Dräger X-node

Automation	Information via X-node Hub and X-node app	
Measuring gases	Oxygen and toxic gases such as Cl <sub>2</sub> , CO, CO <sub>2</sub> , H <sub>2</sub> , H <sub>2</sub> O <sub>2</sub> , H <sub>2</sub> S, NH <sub>3</sub> , NO, NO <sub>2</sub> , O <sub>3</sub>	
Measuring ranges	See sensor data sheet	
Memory function	Real time clock with backup	
	Datalogger	

### Electrical data

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

### Housing

Housing material	Polycarbonate
Protection class	IP65
Dimension	Ca. 170 x 90 mm
Weight	Ca. 300 g

### **Environmental conditions**

Temperature	-20 °C to +50 °C
Humidity	5 % to 95 % r.h.
Pressure	700 hPa to 1300 hPa

# **Technical Data**

### Approval

Electrical Safety	CE	
Radio and Telecommunications Directive	EN 300 328 V2.2.2	
	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 63000:2018	

# **Ordering Information**

Dräger )	K-node	Transmitter
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Dräger X-node Transmitter		56 01 008	
Dräger X-node Hub			
X-node Hub Basic		37 32 056	
X-node Hub Professional		37 32 057	
X-node Hub Premium		37 32 058	
Sensor			
DrägerSensor® CO <sub>2</sub>	0 - 10,000 ppm	68 00 482	
DrägerSensor® Cl <sub>2</sub>	0 - 100 ppm	68 09 665	
DrägerSensor® CO	0 - 1,000 ppm	68 09 605	
DrägerSensor® H <sub>2</sub>	0 - 3,000 ppm	68 09 685	
DrägerSensor® H <sub>2</sub> O <sub>2</sub> HC	0 - 7,000 ppm	68 09 675	
DrägerSensor® H <sub>2</sub> O <sub>2</sub> LC	0 - 300 ppm	68 09 705	
DrägerSensor® H₂S LC	0 - 100 ppm	68 09 610	
DrägerSensor® NH₃ AL	0 - 100 ppm	68 13 735	
DrägerSensor® NH₃ FL	0 - 300 ppm	68 13 260	
DrägerSensor® MEC NO	0 - 200 ppm	68 12 785	
DrägerSensor® NO <sub>2</sub> LC	0 - 20 ppm	68 13 205	
DrägerSensor® MEC O <sub>2</sub>	0 - 25 Vol%	68 12 740	
DrägerSensor® O₃	0 - 5 ppm	68 14 005	
DrägerSensor® OV1		68 10 740	
DrägerSensor® AC		68 10 595	
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MEC-Key Adapter			
MEC-Key		68 12 695	

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Corporate Headquarters Drägerwerk AG & Co. KGaA Moislinger Allee 53–55 23558 Lübeck, Germany www.draeger.com Region Europe
Dräger Safety AG & Co. KGaA
Revalstraße 1
23560 Lübeck, Germany

\$ +49 451 882 0

\$ +49 451 882-2080

□ info@draeger.com