







### 24/7 NOTIFICATION

In manufacturing companies, chemical accidents can occur at any time, even if the legal requirements are complied with. These accidents pose a considerable risk to people and the environment. Although regular inspections are required for the storage of hazardous materials, these are only carried out on a random basis and not throughout the day. To close this safety gap, DENIOS connect provides 24-hour remote monitoring for hazardous materials storage.

## WHAT IS DENIOS CONNECT?

- A complete solution consisting of sensor(s), mobile communication and a web app for direct detection and automatic notification of leaks or faults via
  e-mail and/or SMS
- Data transmission takes place independently of the company network via Narrowband IoT, which is based on ITF
- All DENIOS connect products used in the operation can be centrally monitored and alarms can be independently configured via a cloud-based web app.

### WHAT DOES DENIOS CONNECT OFFER?



## 24 /7 MONITORING

Identify risks at an early stage and avoid consequential damage.



### ALARM ADDRESSING

By e-mail/SMS on smartphone, tablet and desktop PC.



#### CENTRAL MONITORING

Monitoring of all connect products in one application.



#### MOBILE RADIO TECHNOLOGY

No gateway and no local network are needed



## **EMERGENCY MANAGEMENT**

Targeted instructions for effective emergency measures.

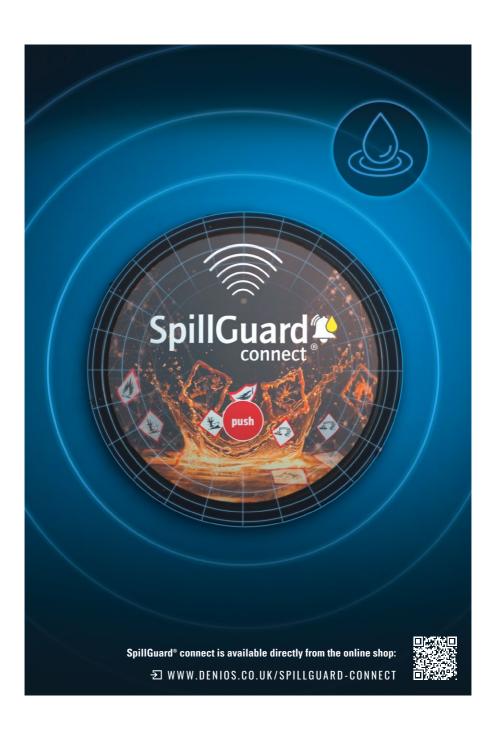


#### DOCUMENTATION

Comprehensive PDF report documentation for audits.







# SAFELY WARNED OF LEAKS

## WITH SPILLGUARD® CONNECT FROM DENIOS

SpillGuard® connect is a leak warning system for the storage of hazardous materials:

The hand-sized device is equipped with a battery and mobile radio and is self-sufficient and operational at the touch of a button

## NO LEAK GOES UNDETECTED

Liquid hazardous materials can spill at any time. By putting a container on a spill pallet, you're doing the right thing: you have reliably prevented the hazardous substance from reaching the ground. Often, however, liquids spilled in the spill pallet are not discovered immediately - for example, if staff are not always present. A leak which does not get cleaned up can quickly become dangerous however. In the case of particularly sensitive substances that emit hazardous vapours, for example, swift action is needed. SpillGuard® connect detects leaking liquids around the clock and reports leaks immediately - even if no one is around. The device can be used almost anywhere thanks to self-sufficient operation and mobile NarrowBand IoT connection.

## TIME-CONSUMING VISUAL INSPECTIONS ARE NO LONGER NECESSARY

Even if no leak occurs, the unit saves the status once a week. The report, which can be exported as a PDF, proves that the operator has fulfilled the necessary safety checks. **SpillGuard® connect saves valuable working time.** 

### SPILLGUARD® CONNECT IN DETAIL

- Display of ambient temperature and battery charge level.
- Operational temperature range 0 to +40 °C, alarm at temperatures >+70 °C.
- Approval for ATEX zone 0.

- Powerful lifetime battery (up to 5 years runtime).
- Weekly status report in PDF format as support for proof of weekly visual inspection, for example for an audit



## SAFELY WARNED OF LITHIUM FIRES

## LI-ION CABINETS WITH DENIOS CONNECT

Defective lithium-ion batteries are often hard to recognise and pose a high safety risk. If a defective lithium-ion battery is charged or stored for a long time, there is a high fire risk. As charging often takes place unattended and outside working hours, the risk of widespread damage is particularly high.

## THREE-STAGE SAFETY CONCEPT

The proven lithium-ion cabinets from the DENIOS SmartStore and SafeStore-Pro series already benefit from fire protection on both sides and a three-stage safety concept (alarm and fire suppression). These features give the emergency services at least 90 minutes for emergency measures to be taken. With DENIOS connect, the status of the three-stage alarm is displayed in the web app, in addition to monitoring of other operating and system parameters - visible to the operator at any time and any place.



## Quick and easy to set up.

The lithium-ion cabinets with DENIOS connect are already equipped with an eSIM card registered in the web app when delivered. Once installed, just connect the cabinet to the power supply and activate data transfer to the web app with the authentication number provided.

## EXTRA SAFETY



### THREE-STAGE ALARM

Classification of disruptive events and activation of appropriate protective measures.



### **OPERATION MONITORING**

Safe monitoring of relevant operating parameters and maintenance status.



## 24 /7 MONITORING

Charging or storage of lithium batteries with comprehensive monitoring.



#### **FULFILMENT OF OBLIGATIONS**

Supervision obligation when charging lithium batteries is fulfilled.



## SYSTEM ERROR DETECTION

Safe monitoring of sensor and electronic faults.



## QUICK ACTIVATION

Authentication and activation in just a few steps.



# SAFELY WARNED OF OPERATIONAL PROBLEMS

## WITH DENIOS CONNECT FOR ROOM SYSTEMS

In the case of a hazardous materials store or storage room for lithium batteries, operational malfunctions can have critical consequences. With the help of DENIOS connect, critical operating parameters such as temperature fluctuations, problems with ventilation, open doors or gas leaks are immediately detected via the sensor system and reported by digital alarm. DENIOS connect also offers an interface (OPEN-API) that can be used to transmit some of the data to the user's control systems.

## Measured variables for room systems:

- Room temperature
- Relative humidity in the room
- Air conditioning system (operating/fault)
- Technical ventilation (operating/fault)
- Heating (operating / fault)
- Door control unit/fire detector (fault)

- Door (open/closed)
- Central power supply (operating/power failure)
- Gas sensor (fault)
- Leak sensor (fault)
- Upcoming maintenance (info)

## Connect-enabled room systems.

DENIOS connect is available for fire-rated room systems WFP and RFP, which have a standard or air-conditioning switch cabinet. The room systems are equipped with the connect function at the factory during the production process. Retrofitting may still be possible after a technical inspection. It should be noted that on-site assembly and conversion work is usually more expensive than equipment ex works.

## Maintenance contract covers running costs.

To benefit from DENIOS connect for room systems, a maintenance contract must be agreed. This includes the running costs for data transmission (mobile service) and cloud access and operation. It is billed as an annual charge.

## Quick and easy to set up.

The connect-enabled room system is already equipped with a data logger and an eSIM card registered in the DENIOS web app when it is delivered. Once installed, just connect the room system to the power supply and activate data transfer to the web app with the authentication number provided. Then add the details of contact persons who will be alerted in the event of an incident.

# **EXCELLENCE IN INNOVATION**









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