

Diffusion Mode Gas Detection at the Point of Use





Diffusion Mode Gas Detection at the Point of Use (PoU)

The D-ReX PoU is the new standard when it comes to monitoring toxic, combustable and corrosive gases at the Point of Use. Its reliable alarm system, clear information display and wide range of communication options, including Bluetooth® and Power over Ethernet, are what sets it apart.



USPs:

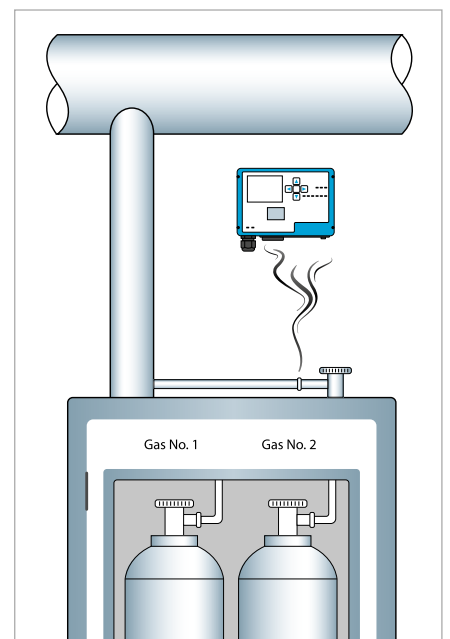
- » High-resolution, full-color 2.4" TFT display
- » Plain text information
- » Bluetooth®

Options:

- » 5x internal relays (form C, programmable)
- » 16x external relays (GMA200-RT/D)
- » LonWorks®

Features:

- » Sensors for more than 30 gases
- » Hot-swappable smart sensor cartridge
- » Tool-free maintenance
- » Power over Ethernet (PoE) communication
- » Addressable over a web portal
- » Password protected menu
- » Interface:
 - Analog: 4–20 mA output
 - Digital: RS-485 (Modbus/RTU)
 - 10/100 Mbit Ethernet (Modbus/TCP)
- » Bright status and alarm LEDs
- » Data logger to review sensor history and alarms
- » CE marked and UL certified



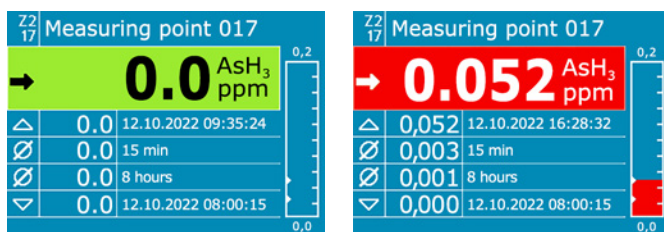
A cost-efficient, easy to use alternative

The D-ReX is a reliable, easy to use gas detection device that enhances the user experience.

High-resolution, full-color display

The 2.4", 320 x 240 pixel full-color TFT display sets new standards for gas detectors. It provides clear and concise information on the gas reading, LTEL or STEL exposure as well as the status of any issues. Information can be displayed in a variety of languages and scripts, including English, German and Simplified Chinese.

Get all the information you need exactly the way you want: no longer will you have to decipher cryptic error codes – information on any issue is displayed in plain text. No more cryptic error codes to decipher, but instead information on any issues in plain text. Status LEDs provide an additional instant overview of vital components of the system.



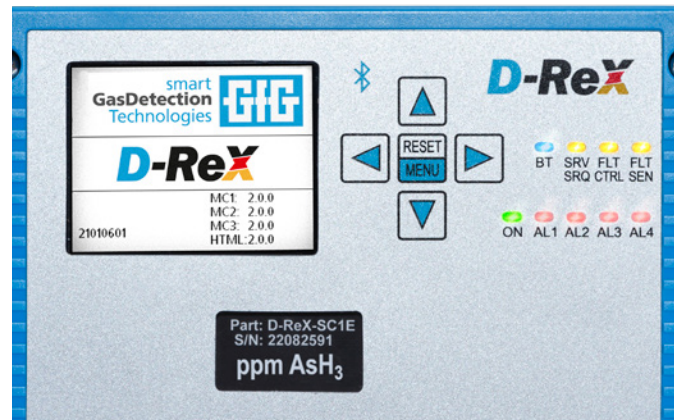
Display in monitoring and alarm mode

Intuitive device management via Bluetooth® and app

Easily manage the D-ReX by accessing all relevant information and its menu by connecting it to your mobile device through Bluetooth®. The app (Android) will give you access to all the information and options you would normally get on the device itself, but without having to physically press any buttons.

Advanced connectivity

The D-ReX comes with a wide variety of communication interfaces. Choose between analog 4–20 mA, digital RS-485 (Modbus/RTU), Ethernet (Modbus/ TCP) and LonWorks® (option) to convey information. For wireless connectivity, you can use the Bluetooth® option. It also features 5 internal programmable changeover relays (option). 16 additional relays can be addressed by connecting the D-ReX to a GMA200-RT/D relay module.



User interface with display, control keys and status LEDs

Periodic sensor self-tests

The plug-and-play smart sensor cartridges are pre-configured and pre-calibrated for easy installation or replacement. Automatic sensor self-tests every 24 hours increase safety while reducing maintenance costs even further.

The new Standard for Versatility: D-ReX

All the advantages mentioned perfectly qualify the D-ReX for numerous applications in virtually all industries. Some of its unique features make it particularly suitable for use in the semiconductor industry, photovoltaic industry and industrial manufacturing as well as laboratories. If you are looking for the gas detector that best suits your needs, the D-ReX will be your first choice for many applications.

Possible areas of application:

- » VMBs (valve manifold boxes)
 - » Process tools
 - » Vacuum pumps
 - » Scrubbers
 - » Gas cabinets
 - » Ambient breathing zones
 - » Storage areas
 - » Cleanroom environments
 - » Sub fabs
- and many more.



Versatility means having options

No two facilities are the same and even within a facility, the requirements for a gas detector can vary from department to department or from one gas being monitored to another. It is therefore an immense help to have a gas detector that can be configured and adapted accordingly.



LonWorks®

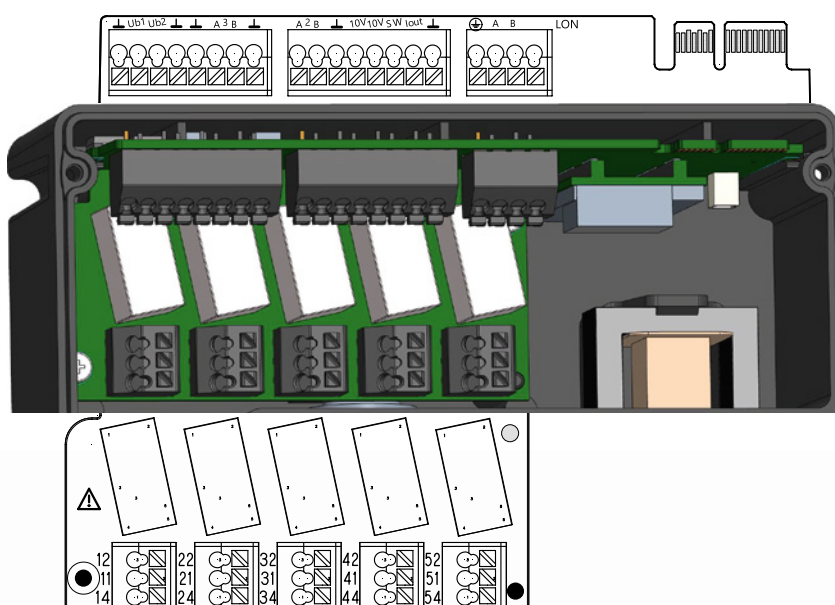
LonWorks is an open and interoperable system for building automation and is characterized by its flexible topology and cross trade functions.

If your previous gas detection system was integrated into your infrastructure via LonWorks or you want your new system to be integrated using the LonTalk® protocol, the D-ReX can be incorporated seamlessly, as all D-ReX versions are available with an optional LonWorks module. Keep the advantages of LonWorks, while benefitting from a state-of-the-art gas detection solution at the same time.

Internal Relays

Depending on the application, it may be beneficial for the gas detector to have its own relays. All versions of the D-ReX are optionally available with 5 internal, freely programmable form C relays. The terminal allocation can be seen here:

Alternatively, you can also connect an external GMA200-RT/D relay module to add a further 16 relays to the D-ReX.



D-ReX versions and options

D-ReX Version	Diffusion Mode	Remote Sensor	eXtraction Module	Py-ReX*	Internal Relays	LonWorks®
Point of Use (PoU)	yes				5 (option)	(option)
Point of Installation (PoI)		yes			5 (option)	(option)
Point of Sampling (PoS)			yes	yes	5 (option)	(option)

* available soon (option)

Smart Cartridge Technology with a Small Environmental Footprint

Smart devices are everywhere by now, but GfG goes a step further to offer you Smart Design. One of the most efficient ways to optimize your company's environmental footprint is to minimize waste. That's why the D-ReX was designed to ensure that only components that are actually subject to wear need to be replaced.

USPs:

- » Only one type of sensor cartridge for all applications
- » Suitable for all available sensors
- » Hot-swappable within seconds in all operation modes
- » Exchangeable joint with bayonet lock
 - With O-ring, for use with lower housing cover

Available Accessory:

- » Calibration cap for PoU

GfG gas sensors are designed to be highly specific to the gas they are intended to detect. While the cross sensitivities of GfG sensors are in accordance with the typical values of sensors for the respective gases in industrial applications, GfG sensors offer the highest level of stability, performance and relative response documentation of any available sensors. For detailed information on this, please refer to the sensors' individual data sheets.

Gases and Measuring Ranges:	See gas list
Interface:	M12
Response Time:	Sensor dependent (See sensor data sheet)
Expected Average Life of the Sensor:	Sensor dependent (See sensor data sheet)
Measuring Principle:	Sensor dependent; Available options: EC = electrochemical CC = catalytic combustion (LEL) IR = infrared (CO ₂ , N ₂ O, LEL)



List of detectable gases

Formula	Gas Name	Nominal Range	Available	Formula	Gas Name	Nominal Range	Available
AsH ₃	arsine	0 ... 1.00 ppm	yes	HF	hydrogen fluoride	0 ... 10.0 ppm*	yes
B ₂ H ₆	diborane	0 ... 1.00 ppm	yes	HMDS	hexamethyldisilazane	0 ... 0.500 vol%	yes
Br ₂	bromine	0 ... 5.00 ppm	yes	LEL	combustible gases		yes
Cl ₂	chlorine	0 ... 5.00 ppm	yes	N ₂ H ₄	hydrazine	0 ... 1.00 ppm	yes
ClF ₃	chlorine trifluoride	0 ... 1.00 ppm	yes	N ₂ O	nitrous oxide	0 ... 1000 ppm 0 ... 1.0 vol%	yes yes
ClO ₂	chlorine dioxide	0 ... 1.00 ppm	yes	NH ₃	ammonia	0 ... 100 ppm 0 ... 1000 ppm	yes yes
CO	carbon monoxide	0 ... 500 ppm	yes	NO	nitrogen monoxide	0 ... 25 ppm 0 ... 250 ppm	yes yes
CO ₂	carbon dioxide	0 ... 5 vol%	yes	NO ₂	nitrogen dioxide	0 ... 30 ppm	yes
COCl ₂	phosgene	0 ... 1.00 ppm	yes	O ₂	oxygen	0 ... 25 vol%	yes
ETO	ethylene oxide		tbd	O ₃	ozone	0 ... 1.00 ppm	yes
F ₂	fluorine	0 ... 5.00 ppm	yes	PH ₃	phosphine	0 ... 1.00 ppm	yes
GeH ₄	germane	0 ... 5.0 ppm	yes	SeH ₂	hydrogen selenide	0 ... 5.00 ppm	yes
H ₂	hydrogen	0 ... 1.000 vol% 0 ... 4.000 vol%	yes yes	SiH ₄	silane	0 ... 50 ppm	yes
H ₂ S	hydrogen sulfide	0 ... 100 ppm	yes	SO ₂	sulfur dioxide	0 ... 20 ppm	yes
HBr	hydrogen bromide		tbd	TEOS	tetraethyl orthosilicate	0 ... 100 ppm	yes
HCl	hydrogen chloride	0 ... 30.0 ppm	yes	TMB	trimethyl borate	0 ... 200 ppm	yes
HCN	hydrogene cyanide	0 ... 30.0 ppm	yes				

* above > 0.3 mg/m³
additional gases on request

Technical Specification: D-ReX (PoU)

Gases and Measuring Ranges:	See gas list
Measuring Principle:	Sensor dependent; available options: EC = electrochemical CC = catalytic combustion IR = infrared
Sampling Method:	Diffusion
Display and Interface:	Display: 2.4" full color TFT (320 x 240 pixel) Interface: 5 push buttons
Selectable languages:	German, English, more to come (up to 6)
Communication:	<ul style="list-style-type: none"> » Analog: 4–20 mA output » Digital: RS-485 (Modbus/RTU) » 10/100 Mbit Ethernet (Modbus/TCP) » Bluetooth® » Interface for external pyrolyzer » LonWorks® (option) <p>Relays: 5x internal (programmable) form C relays (optional) 16x external relays (optional) Max. 2 A / 30 V DC Min. 10 mA / 5 V</p>
Response Time:	Sensor dependent (see sensor data sheet)
Expected Average Life of the Sensor:	Sensor dependent (see sensor data sheet)
Operating Temperature:	-10 to +40 °C 14 to 104 °F
Operating Humidity:	5 to 90 % RH*
Operating Pressure:	70 to 130 kPa
Power Supply:	12 to 30 V DC SELV/PELV PoE = 48 V DC
Housing:	Plastic
Protection Class:	IP54 (IP20 with Ethernet)
Mounting:	(DIN) rail IEC/EN
Weight:	650 g up to 850 g
Dimensions:	145 x 105 x 78 mm (W x H x D) 5.7 x 4.1 x 3.0 in
Labelling:	CE and UL certification
Approvals / Certifications:	
Functional Safety (SIL):	DIN EN 61508-2 (pending)

* sensor dependent

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