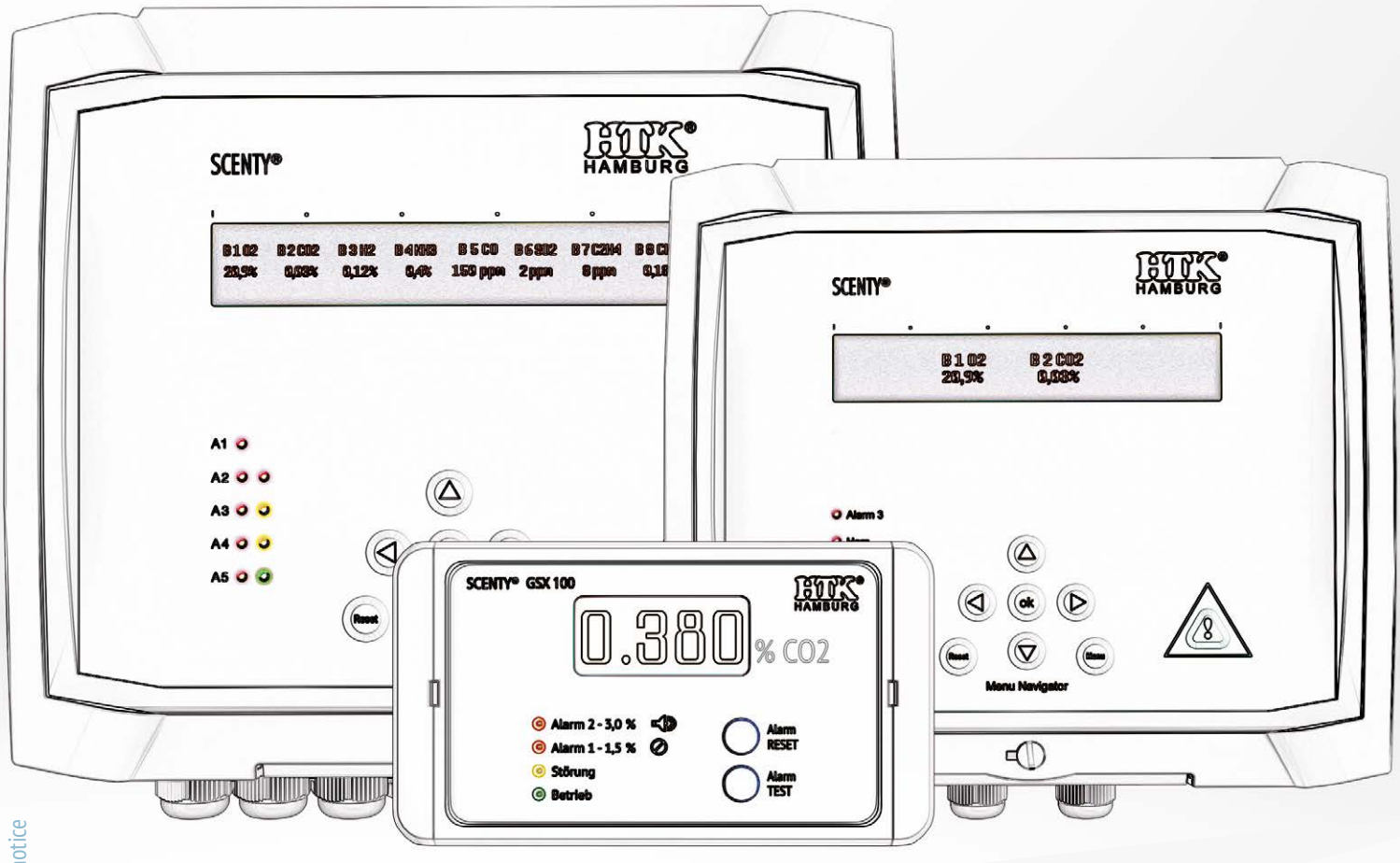

Safety at the Highest Level

For more than 30 years we have stood for quality and safety as a manufacturer of gas warning systems

SCENTY® Gas Detection Systems

since 1978

SCENTY® Gas Detection Systems

Safety at the highest level

For more than 30 years we have stood for quality and safety as a manufacturer of gas warning systems

HTK Hamburg does not compromise, when it comes to safety.
Each gas warning system can be tailored to customer specifications and freely configured. With our SCENTY®Gas Sensors you can monitor a wide variety of toxic and flammable gases.

Quality decides!

HTK Hamburg does not compromise when it comes to safety. For more than 30 years we have stood for quality and safety as a manufacturer of gas warning systems. We develop, produce and distribute high-quality gas detection systems and set new standards in measurement accuracy, durability and customer-specific solutions.

Guaranteeing safety and protecting lives is our promise to our customers. Whether with unique applications or in the everday production processes, we deliver a full solution.

We can support you in preparing risk assessments, planning, assembly, installation, commissioning and ongoing maintenance.

- Gas warning systems for all applications
- Detection of combustible gases and vapours
- Detection of toxic gases and oxygen
- Sensors for fixed gas warning systems
- Personal protection measuring instruments

Product solutions from HTK Hamburg - SCENTY® Gas Warning Systems at a glance

Our SCENTY® Gas Detection Systems are a low-cost and modular gas warning system. The central control units can utilise a variety of sensors and provide multiple output options. If a dangerous gas concentration is detected, integrated audible and visual alarms are activated. The relays can be freely configured suit the requirements of the customer.

We offer intelligent, self-developed solutions for a wide range of applications and our long-life, reliable sensors and tailor-made gas detection systems alongside our services allow you to minimise costs yet guarantee a high degree of safety and security!

Our gas detection systems monitor your production facilities and workstations and provide early warning of any gas hazards.

Accessories such as external audible devices, visble warning lights, SMS modules and emergency power supplies are compatible with our gas alarm systems and are automatically integrated into the system. Our gas warning systems are available as small compact flexible units as well as modular systems, offering you solution-oriented and expandable safety concepts.

Customer Specific Configurations

Each HTK Hamburg Gas Warning System can be individually configured to customer specifications. SCENTY® Gas Warning Systems, BUS modules, relay and expansion modules are available as well as UPS (Uninterruptable Power Supply).

SCENTY® Gas Sensors cover a wide range of toxic and flammable gases. The detectors can be installed as single lines or in a loop offering maximum flexibility and economy!

SCENTY® Gas Detection Systems

Security in many Areas

- Underground garages and multi-storey car parks
- Hospitals
- Labs
- Breweries and wineries
- Food companies
- Chemical and Petrochemical industry
- Manufacturing industry
- Building surveillance
- Gas industry

Example of a SCENTY® Gas Warning System in an underground car park

Thanks to their modular design and our proven modular system, SCENTY® Gas Warning Systems can be integrated anywhere! SCENTY® Gas Warning Systems can easily be combined with each other and guarantee safety in operation.

Service

You know our gas warning systems - do you also know our extensive Service offer?

Even a small system failure can shut down your entire production line! Preventative maintenance and repair services from our highly skilled technicians ensures you have maximum uptime and minimal unforseen costs.

Our Service and maintenance packages are bespoke to your individual needs and system requirments ensuring you can easily forecast low maintenance costs and remove any nasty surprises

Maintenance & Service

Sensor Replacement

Mounting & commissioning

Maintenance & Service foreign plants

Replacement devices

Documentation

All HTK Hamburg service technicians are fully trained in our systems and meet the requirements stated in T021/T023 and are fully competent in all on site controls.

We will provide you with all the necessary printed documentation and digital form and will work with you to ensure that the recommended inspection intervals are adhered to on time.

Our service is available worldwide via our official partners.

Personal Protection Instruments

Security to go

Mobile Gas Detection Technology

Portable Gas Detectors protect you and your employees, even when working in confined spaces such as silos, sewers or shafts. Fast response times, robust construction and a long service life ensure that even in the toughest industrial working conditions they provide reliable safety.

Overview Mobile Gas Detectors

SCENTY® PSA Easy

The SCENTY® PSA Easy Gas Detector is a disposable device, designed for use in potentially explosive atmospheres. It offers a reliable and long-lasting monitoring in a compact, lightweight and maintenance-free housing. The SCENTY® PSA Easy has a long service life of 2 years and is suitable for hydrogen sulphide (H2S), carbon monoxide (CO), ammonia (NH3), hydrogen (H2), sulphur dioxide (SO2) or oxygen (O2).

SCENTY® PSA Easy P

The SCENTY® PSA Easy P is a portable single gas detector designed to detect the presence of oxygen, and toxic gases in the ambient environment - hydrogen sulphide (H2S), carbon monoxide (CO), Ammonia (NH3), Hydrogen (H2), Sulphur dioxide (SO2), or oxygen (O2). SCENTY® PSA Easy P has a replaceable gas sensor and battery, giving an unlimited lifetime of operation.

SCENTY® PSA Easy N

The SCENTY® PSA Easy N is a single gas detector for CO2 that offers reliable and durable carbon dioxide detection in a compact, and lightweight package. SCENTY® PSA Easy N for CO2 uses a low power NDIR (non-dispersive infra red) sensor to provide fast and accurate detection. Its low power consumption allows for a battery life in excess of seven days (continuous) from a single charge.

SCENTY® PSA Multi

SCENTY® PSA Multi is a portable multi-gas detector that detects four different gases (oxygen (O2), carbon monoxide (CO), hydrogen sulphide (H2S), combustible gas). It has a LCD screen and gives bright and loud alarms. It was developed to withstand the toughest industrial working conditions.

SCENTY® PSA One

The SCENTY® PSA One is a rugged, compact, single gas monitor designed for use in harsh environments. Its compact and lightweight construction makes it ideal for use in all industries. The SCENTY® PSA One is a maintenance-friendly monitor and available for hydrogen sulfide (H2S), carbon monoxide (CO), ammonia (NH3), hydrogen (H2), sulphur dioxide (SO2) or oxygen (O2).

SCENTY® Gas Detection Systems

Overview Gas Detection Systems

SCENTY® GSX 100

Our low-cost and smallest gas warning system is versatile and can be used for the monitoring of CO2 concentration e.g. in breweries, bar areas, cold rooms, refrigerated counters and many other possible applications. SCENTY® GSX 100 reliably warns against CO2 gas hazards, with integral optical and acoustic alarms. Internal relays allow connection options for additional signal transmitters or operation of ventilation. Measured values and operating status can easily be read from a distance! Low maintenance requirements, gas sensor service life 15 years.

SCENTY® GWA 201

Our compact and very powerful single or dual channel gas warning system is versatile and flexible for all areas of application in which gas concentrations must be monitored.
With LCD and LED display, freely configurable relay contacts, and data logger. It can be used with all SCENTY® Gas Sensors and any other industry standard analog detector.

SCENTY® GWA 401/801

The constantly increasing demands for complex gas warning systems require a high degree of flexibility.
Our SCENTY® Gas Detection System GWA 401/801 is available as a low-cost modular system. The system allows for connection of up to 80 analog gas sensors and expansion to up to 100 relay contacts, with monitoring and operation via a central control system.
Our SCENTY® Gas Warning Systems reduce installation engineering, time, and costs.

SCENTY® GWA BUS

Our SCENTY® GWA BUS offers all the advantages of the GWA401/801.
The cable-saving BUS installation enables the looping of up to 80 gas sensors significantly reducing the amount of input modules required. Through the combination of analog and BUS gas sensors, a total of up to 160 gas sensors can be connected, configured and monitored.
The modular system allows the design to fully meet customer-specific applications.

SCENTY® GSX 100

Compact and reliable

Our little one

Our low-cost and smallest gas warning system can be used in many ways for monitoring CO2 concentration e.g. in breweries, bar areas, cold storage rooms, refrigerated counters and many more possible applications. SCENTY® GSX 100 reliably warns against CO2 gas hazards, optically and acoustically. Connection options for additional signal transmitters or ventilation controls are available. Measured values and operating status can also easily be read from a distance! Low maintenance requirements, with sensor service life >15 years.

Features

The gas detection system SCENTY® GSX 100 is a compact, fast and easy to use gas detection system to be installed for safe and continuous measurement as well as monitoring of elevated concentrations of carbon dioxide (CO2) in the ambient air.

Application

- Monitoring of dispensing systems
- Monitoring of CO2 water dispensers
- Beverage industry
- CO2 refrigeration storage
- CO2 cylinder storage

For the monitoring of one or two rooms via a single control unit. Carbon dioxide is colourless and odourless and can easily build up in closed or poorly ventilated rooms. A leak can quickly lead to life-threatening CO2 concentrations in the air you breathe without you even noticing it.

Consisting of:

- Control unit with acoustic and visual alarm complete with 2 meters of power cable
- Volt-free relay contacts
- Gas sensor with 3 meter sensor cable

The SCENTY® GSX 100 is available in two versions. The standard package with one or two gas sensors.

Benefits

Ready for action immediately! The SCENTY® GSX 100 is a ready-to-use gas warning system for easy installation and commissioning. It consists of a control unit with a display, and LED indicators for operation and alarm status. The rugged waterproof housing, includes an integrated sounder, 2 relay contacts for the control of additional extraction and ventilation systems, an internal power supply and proven HTK sensor technology. The sensor is pre-wired with a 3 meter long cable. Optionally a 2nd sensor can be installed. The sensor operates with a stand-alone background calibration, is self-monitoring and extremely durable. The pre-calibrated sensors are immediately ready for use!

The SCENTY® GSX 100 is simply mounted on a wall and can be either permanently connected to an AC or DC power supply or via the optionally available mains cable.
With its high reliability, short reaction time to changing carbon dioxide concentration, the large display with integrated visual and audible alarms, and the minimal installation, the SCENTY® GSX 100 is a versatile and safe gas warning system for monitoring for dangerous concentrations of carbon dioxide.

The SCENTY® GSX 100 - for example used in office space and in office kitchens

SCENTY® GSX 100

Safety first!

ASI 6.80
Safe operation of dispensing systems

We are able to provide help and advice on how to protect you and your employees from the hazards which may occur in the area of a beverage dispensing system. Please call us.

Technical Data	
Type	SCENTY® GSX 100
Comprising	Evaluation unit and sensor unit
Optional	Connection of a second CO2 sensor
Medium	Carbon dioxide - CO2
Measuring range	0-5 vol.%, gas inlet via diffusion measuring head
Measuring principle sensor	IR absorption
Alarm 1	1.5 Vol.% (self-reseting)
Alarm 2	3.0 Vol.% (latching)
Operation indicator	LED display (green)
Alarm indicator	LED display (red)
Fault indicator	LED display (yellow)
CO2 indicator	7 segment display
Display	Measured value: 0.000 / 0.001% resolution
Control element	Acknowledgment of alarm messages is effected by button on the front of the evaluation unit
Service	SEr – Service
Error/fault	Err – Error/fault
Alarm output	1x pot. free relay contact (switching capacity 4A AC max. 230 V, 2A DC max. 30 V) 1x Piezo Buzzer 89 dB
Sensor connection	3 meter control cable
Operating temperature	-10°C ... +50°C
Humidity	0-95% relative humidity, non-condensing
Nominal voltage	110 - 230 V AC / 50/60 Hz
Nominal power	max. 10 Watt
Dimensions	Control unit 151 x 80 x 60 mm Sensor 89 x 80 x 47 mm
Type of protection	Control unit: IP65 Sensor: IP20
Fixture	Wall mounting housing
Declaration of conformity	CE Conformity

Subject to technical modifications 09/2019

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SCENTY® GWA 201

Powerful and flexible

Our 2 Channel System

Our compact and very powerful single or dual gas warning system is versatile and flexible for all areas of application in which continuous monitoring of dangerous gas concentrations is required. With LCD and LED display, freely configurable relay contacts, and data logger. It can be used with all SCENTY® Gas Sensors and any other industry standard analog detector.

Features

SCENTY® GWA 201 is a flexible gas warning system which can be used with any industry standard 4-20 mA device.
It reliably monitors 1-2 toxic or flammable gases, vapours and oxygen.

Applications

- Industrial safety
- Plant and operational safety

Comprising:

- Control unit with LCD and LED display
- 3 volt-free alarm relays
- 1 audible alarm relay
- Device fault relay
- 2 digital inputs
- Power supply

Benefits

Built into a robust and waterproof housing, with an integrated power supply unit, an easy-to-read LCD display and LED indicators for operation and alarm status, the gas warning system can simply be mounted on the wall. The gas warning system is equipped with volt-free relay contacts for 3 alarm levels, which are also assigned to the respective sensor.

In addition, an audible alarm relay, a device malfunction relay, and 2 digital Inputs for external remote acknowledgement are included.

All relevant configurations, such as alarm limits, sensor signals, maintenance date can be interrogated. Alarms can be configured latching or non-latching. A single integrated RESET button enables you to acknowledge the alarms.

MAINTENANCE MODE allows maintenance to be carried out without decommisioning the system and interfering with day-to-day operations.

The SCENTY® GWA 201 Gas Detection System is the compact solution for monitoring smaller areas, and offers high security and flexibility in a simple cost effective package.

The configuration of the SCENTY® GWA 201 is carried out via software using a laptop or PC. Connection cable and software are available as accessories with a corresponding training course.

SCENTY® GWA 201

Working without risk

Security in many areas

Areas of application:

- Cold stores
- Fire extinguishing systems
- Beverage industry

Technical Data		
Type	SCENTY® GWA 201	
Measuring points	1-2 sensors	
Power supply	100 - 240V AC, 50/60 Hz or 24 V DC (special version)	
Power consumption	max. 46 VA	
Connection terminals	solid 0.5 - 1.5 mm2 flexible 0.5 mm2 (L max. 2 A) flexible 0.75 - 1.5 mm2 (L max. 4 A) flexible 0.5 -1 mm2 (with wire end ferrule with plastic collar) flexible 0.5 - 1 mm2 (with ferrule without plastic collar)	
Cable types	e.g. JY(St)Y, NYM, Ölflex	
Measuring signal input	Analog 4-20mA	
Digital input (24V)	Configurable for external horn/alarm reset or e.g. Emergency stop solenoid valve.	
Alarm thresholds	3 freely adjustable alarm ranges per measuring point	
Alarm relay	1 relay (changeover contact) per alarm (3 total) 1 acoustic alarm relay (depending on alarm thresholds) 1 relay (changeover contact) Device fault message (GSM)	
Max. relay load	250 V AC / 30 V DC max. 2.5 A	
Alarm output	Collective alarm, zone alarm or individual alarm messages, acoustic alarm relay, main switch-off relay e.g. for a solenoid valve in the gas supply line. Version potential-free change-over contact 250V/2.5A. Alarms can be designed as self-extinguishing or self-retaining.	
Operation	Reset button for acknowledging alarms and acoustic alarm Maintenance button for activating the maintenance mode	
LED display	Operation, alarm, fault and maintenance message	
Display	Concentration measuring points	
System	Watchdog function, self-monitoring, system clock, alarm suppression at system start, maintenance interval monitoring	
Memory	Measured data and alarm memory via SD card	
Ambient conditions	Operating temperature	0 - 50 C°
	Storage temperature	0 - 50 C°
	Ambient humidity	0 - 95 % relative humidity, non-condensing
Protection class	IP65 /DIN EN 60529 with closed PG cable glands	
Dimensions	199 mm x 179 mm x 106.5 mm (without PG fittings)	
Weight	1,2 kg	
Norms (building regulations)	Certified according to ISO9001 CE marking	

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SCENTY® GWA 401, 801, BUS

Everything's in there

Exactly what your application needs

Our SCENTY® GWA 401 and 801 are available as inexpensive, and modular systems. Reducing the installation requirments enables you to take advantage of the cost savings with our gas warning systems. Our SCENTY® GWA BUS offers all advantages of the SCENTY® GWA 401/ 801, but offers the possibility by the combination of analog and BUS gas sensors to connect, configure and evaluate a total of up to 160 gas sensors.

Features

Our gas warning systems SCENTY® GWA 401 and 801 are low-cost modular gas warning systems. Industry standard analog 4-20 mA inputs can be used with all common gas sensors and analog transmitters for temperature, and pressure etc. The basic gas warning system has capacity for 1 to 8 analog inputs, which can be expanded to up to 80 analog inputs using additional modules.

The expansion modules can be mounted remotely from the central control panel via a digital BUS. In each extension module 10 freely configurable volt-free relay contacts are available. Thus individual alarms and zone alarms can be triggered quickly and easily directly locally. This greatly simplifies the assembly.

All SCENTY® GWA 401 and 801 Systems can be equipped with a BUS module and used with an additional 80 digital BUS gas sensors. This makes our gas warning systems suitable for up to 160 gas sensors.

Up to 5 alarm limits can be set for each connected gas sensor and mean values can be configured. If a gas alarm is detected, the volt-free relay contacts will activate optical and acoustic alarms and initate corresponding actions, e.g. ventilation circuit, SMS alarm.

The units are available as wall-mounted systems in our proven waterproof housings. Customer-specific systems are available in our proven modular system contained in a steel wall housing, with optional integrated UPS emergency power supply and the required number of relay contacts individually mounted.

The configuration of the SCENTY® Gas Warning System is carried out via software and a laptop or PC. Encrypted configuration files can be created remotely and installed by the operator.
Connecting cables and software are available as accessories with corresponding training.

Example design of a SCENTY® Gas Warning System

SCENTY® GWA 401, 801, BUS

Working without risk

Security in many areas

Areas of application:

- Cold stores
- Fire extinguishing systems
- Beverage industry
- Sewage treatment plants
- Automobile industry
- Underground garages

Technical Data		
Type	SCENTY® GWA 401 SCENTY® GWA 801 SCENTY® GWA BUS	
Measuring points	SCENTY® GWA 401 SCENTY® GWA 801 SCENTY® GWA BUS	1-4 sensors 1-8 sensors, expandable to max. 80 measuring points 1-80 BUS-sensor can be combined with 1-80 analog sensors
Power supply	100 - 240V AC, 50/60 Hz or 24 V DC (special version)	
Power consumption	max. 100 VA	
Connection terminals	solid 0.5 - 1.5 mm2 flexible 0.5 mm2 (I max. 2 A) flexible 0.75 - 1.5 mm2 (I max. 4 A) flexible 0.5 -1 mm2 (with wire end ferrule with plastic collar) flexible 0.5 - 1 mm2 (with ferrule without plastic collar)	
Cable types	e.g. JY(St)Y, NYM, Ölflex	
Measuring signal input	Analog 4-20mA, Modbus RTU	
Digital input (24V)	2 freely configurable digital inputs for external acoustic alarm/alarm reset, Deactivation of alarm outputs via key switch function or e.g. emergency stop solenoid valve	
Alarm thresholds	5 freely adjustable alarm ranges per measuring point	
Alarm relay	1-10 volt-free change-over contacts expandable via sub-distribution up to 100 volt-free change-over contacts, e.g. can be used for alarm messages, error messages or acoustic warning controls	
Max. relay load	250 V AC / 30 V DC max. 2,5 A	
Alarm output	Collective alarms, zone alarms or individual alarm messages, horn relay, main switch-off relay e.g. for a solenoid valve in the gas supply line. Alarms can be designed as latching or non-latching	
Operation	Reset button to acknowledge alarms and horn, maintenance button to activate the maintenance mode, operating keys for menu guidance	
LED display	Operation, alarm, fault and maintenance message	
Display	Concentration measuring points Error message Measuring point Alarm message Measuring point	
System	Watchdog function, self-monitoring, system clock, alarm suppression at system start, maintenance interval monitoring, visualisation software (optional)	
Data interface	Ethernet (Modbus TCP, web server)	
Memory	Data memory for up to 100 million measured values (optional)	
Ambient conditions	Operating temperature	0 - 50 C°
	Storage temperature	0 - 50 C°
	Ambient humidity	10 - 95 % relative humidity, non-condensing
Protection class	IP65 /DIN EN 60529 with closed PG cable glands	
Dimensions	264 mm x 234 mm x 141 mm (without PG screw connections)	
Weight	2,5 kg	
Norms (building regulations)	Certified according to ISO9001 CE marking	

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SCENTY® Gas Detection Systems

Overview Applications and Gases

The portfolio is suitable for detecting many different gases in many different types of application.

Here you will find a small overview of areas in which toxic and/or dangerous gases are typically used or found.

Fields of application	Gases to be monitored									
	CO2	CO	H2S	SO4	NO2	Cl2	O2	NO	Refrigerants	NH3
Underground garages, tunnels		●			●			●		
Chemical industry		●	●	●	●	●	●	●		
Mineral oil industry		●	●	●						
Iron and steel foundries		●					●	●		
Coal-fired power stations		●	●				●			
Blast furnaces and steel rolling mills		●					●	●		
Paper, textile and leather industry			●			●				
Mining		●					●			
Automobile industry		●			●			●	●	
Garages		●			●			●	●	
Rubber processing industry			●							
Waste water treatment plants			●							
Swimming pools and drinking water treatment						●				
Plastics processing Industry						●				
Fire extinguishing systems	●									
Offices and sports facilities	●									
Refrigeration plants	●								●	●
Beverage industry	●									●
Pellet heating		●								

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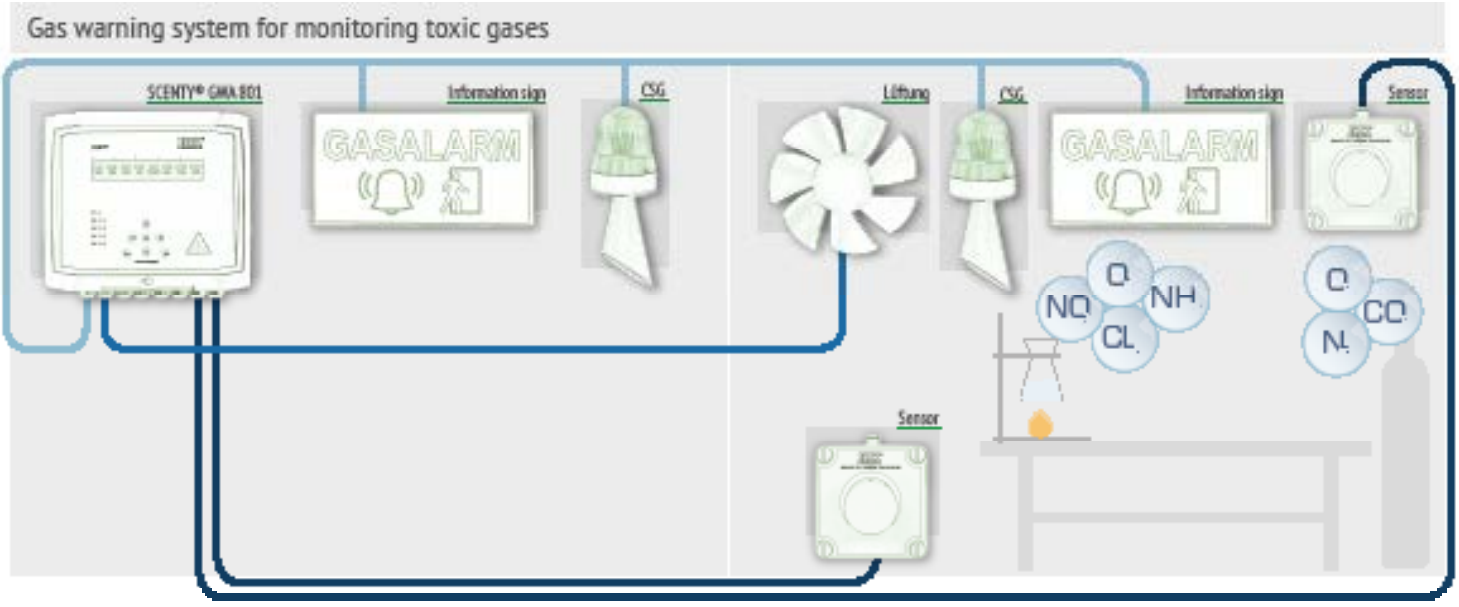
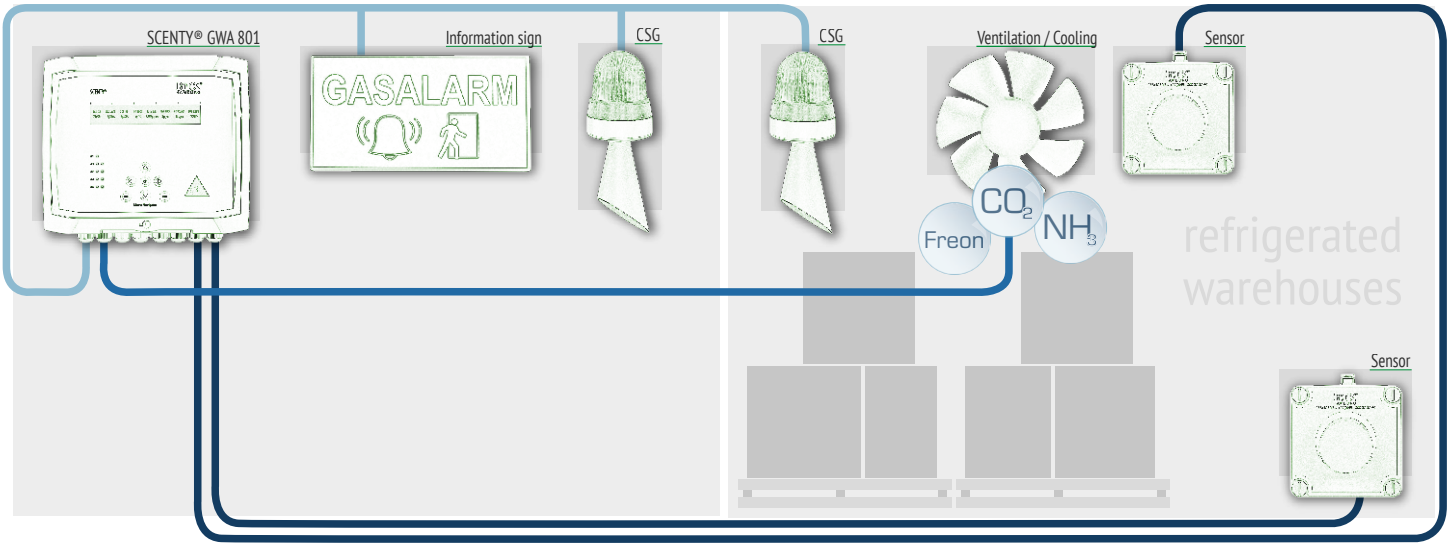
Application Examples



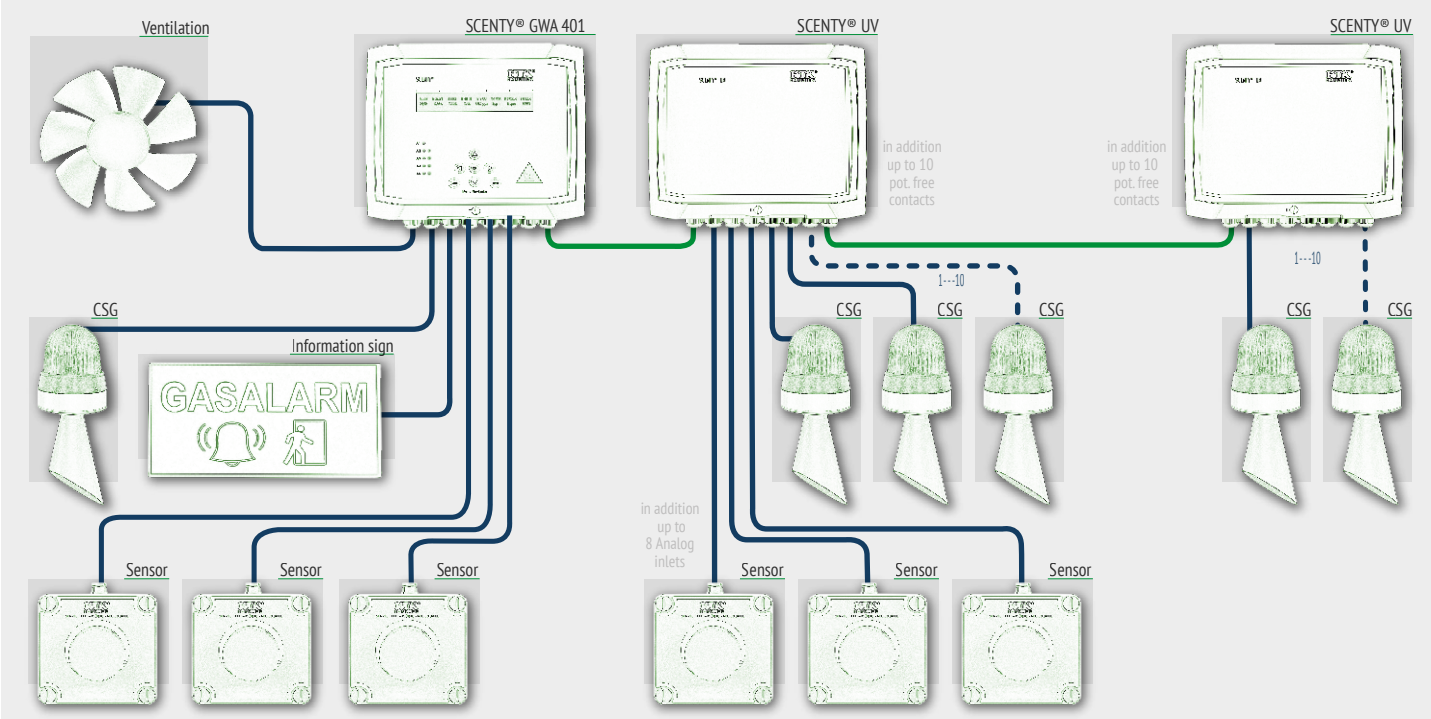
SCENTY® Gas Detection Systems

Application Examples

Gas warning system for monitoring dispensing and refrigeration systems



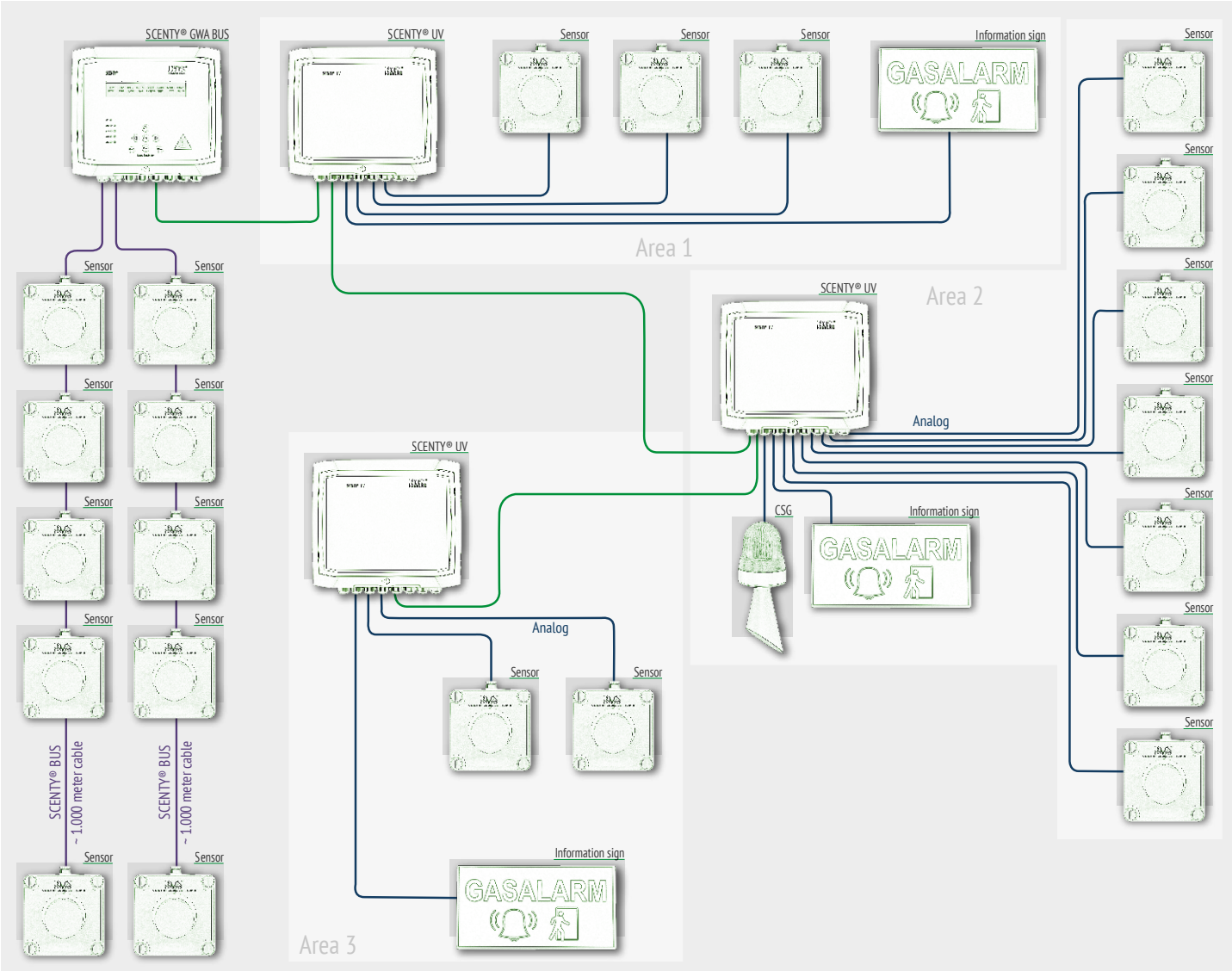
Gas warning system in analog topology



SCENTY® Gas Detection Systems

Application Examples

Gas warning system in a combination of BUS and analog topology



SCENTY® Gas Detection Systems

HTK Hamburg Academy

It is important to understand how to correctly manage and maintain your gas warning systems. We can train you on the gas warning system installed at your site, covering troubleshooting and periodic testing , which can be carried out by the user.
This would cover the maintenance and regular testing of the Gas Warning System.

The requirements of the trade associations for the use and operation of gas warning systems were revised in 2016. The change affects the maximum interval for functional checks, which standardizes for all sensors to the lower interval of 4 months.

With more than 30 years of experience, we plan and execute the implementation of the current specifications individually according to your possibilities and your needs. We can use this knowledge to advise on suitable maintenance and inspection intervals together with the customer, and provide corresponding instructions via our HTK Hamburg Academy.

For portable gas detectors, the visual inspection and the display test must be carried out with test gas before each shift of work.

The concentration of the test gases used should meet a specified accuracy (+/-5%).

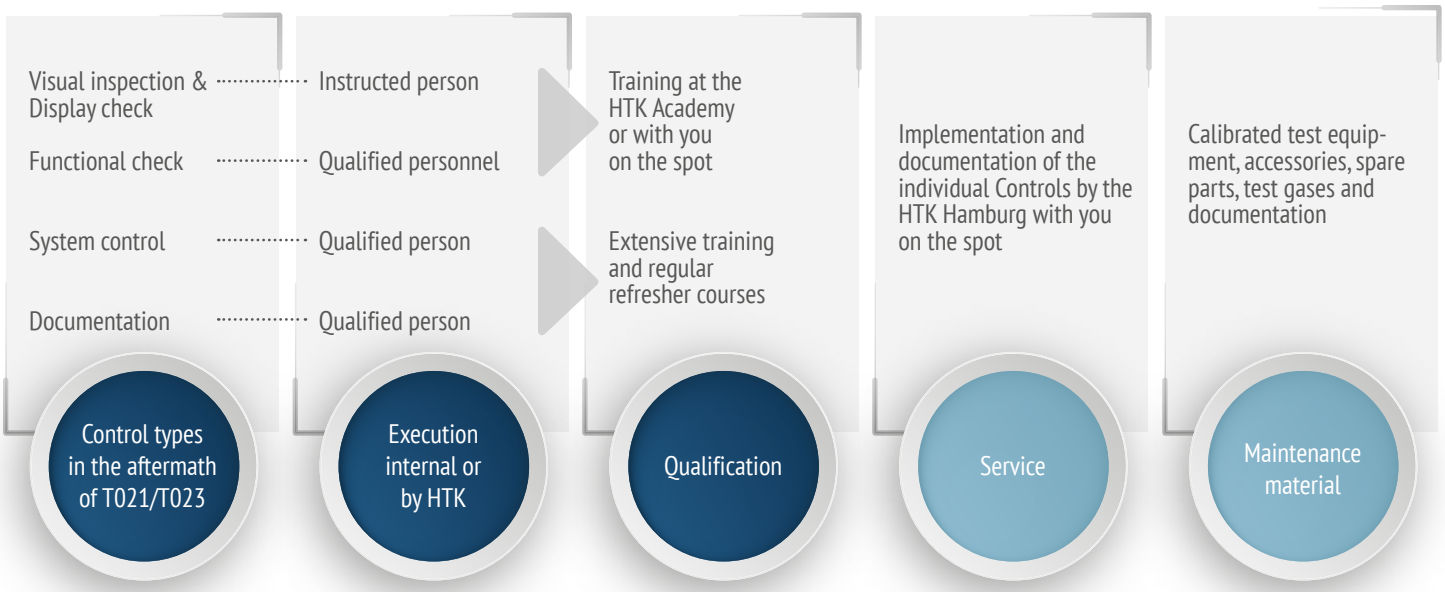
With HTK Gas Warning Systems, portable devices and service offerings you can be sure to meet and comply with the current rules and standards of the T021/ T023 or DIN EN 60079-29-22 completely.

We conduct our training courses in our training centre in Hamburg or at your site. Please call us for more details.

Visualization Control Process

With so many regulations and guidelines,
it's not easy to summarise.

Here is a small overview of intervals and prescribed controls and who is entitled to carry it out.



Portable Gas Detectors

Control type	Intervals
Visual inspection & display test	Before each shift, in multi-shift operation daily use; close to the time of use
Functional check	4 months for Ex, Tox, O2
System control	1 year
Records	3 years

Fixed Gas Warning Systems

Control type	Intervals
Visual inspection	1 month
Functional check	4 months for Ex, Tox, O2
System control	1 year
Records	3 years

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Accessories

Overview Accessories

SCENTY® USV

SCENTY® Emergency Power Supplies can be integrated in gas warning system control cabinets or in a separate wall-mounted housing. With our emergency power modules you can bridge at least 1 hour of power outage and ensure monitoring for gas hazards.

SCENTY® SMS

SCENTY® SMS Module for forwarding alarms and malfunctions to mobile devices via SMS.

SCENTY® UV

SCENTY® Sub-Distribution can be combined with the GWA401/ 801 and BUS System.
Each sub-distribution allows the use of 8 additional analog gas sensors.
Each sub-distribution has 10 further relay contacts, which can be configured according to the application.

Combination Signal Transmitter

Our maintenance-free electronic horn with a long service life of up to 5,000h reliably warns you of dangers. Visual and audible alarms can be separately controlled.

Information Sign

The sign „Gas alarm“ alerts you and your employees to the dangers of a gas alarm and provides brief information on what to do in the event of an alarm.

Accessories

Overview Accessories

Illuminated Information Sign

The illuminated banner serves as a visual alarm for gas hazards. Flashing in case of alarm and displaying the words GAS ALARM and the pictogram. The LED light banner is controlled via a volt-free relay contact from the gas warning centre.

Illuminated Information Sign Pictogram

Our LED light banners for underground garages are marked with generally understood pictograms that are also internationally recognised.
Flashing LED light sources with 50,000 operating hours and an integrated audible alarm are reliable against gas hazards.

Sensor Protective Cover

The sensor protection cover protects your sensors from damage caused by high pressure cleaning equipment and detergents. The sensor is simply mounted on a mounting plate and the stainless steel cap is pushed over it.

Sensor Protection Guard for SCENTY® GSX 100

The sensor protection bracket serves as "ram protection" and prevents your sensors from being damaged, e.g. by forklift truck or other mobile machinery.

For further information on our accessories, please contact us by telephone: +49 - (0)40 - 600 38 38 - 0 or by e-mail at htk@htk-hamburg.com

Gas Sensors

Special requirements require special solutions

Due to a waterproof but gas-permeable construction, a diffusion measuring head specially developed for the application, robust technology and a housing specially adapted for SCENTY® gas sensors in the food industry, the sensor technology is virtually insensitive to high-pressure cleaners and water. Due to the high demands on the protection class - especially in the food industry - we had checked the protection class IP67 and IP69K of the SCENTY® gas detection again. The test was performed by an accredited test institute and the protection classes have been reconfirmed. The SCENTY® gas sensors are waterproofed and reliably protect against the dangers of toxic and flammable gases.

Overview Gas Sensors Analog 4-20 mA

GSC 200

Gas Detector Unit with an electrochemical sensor is suitable for indoor and outdoor use, and specifically designed for monitoring oxygen levels. Versatile and reliable with innovative modular design makes it suitable for all industrial sectors. Waterproof housing makes GSC 200 ideal for the food industry.

GSZ 300

Gas Detector Unit with an electrochemical sensor is suitable for indoor and outdoor use, and specifically designed for monitoring oxygen levels. Versatile and reliable with innovative modular design makes it suitable for all industrial sectors. Waterproof housing makes GSC 200 ideal for the food industry.

GSE 400

Gas Detector Unit with an electrochemical sensor is suitable for indoor and outdoor use. The GSE 400 is suitable for the detection of toxic or combustible gases as well as oxygen. GSE 400 offers the highest reliability and maximum performance in a compact housing. Factory calibration to industry standard measuring ranges. Suitable for all industrial areas.

Gas Sensors

Overview Gas Sensors Analog 4-20 mA

GSI 400

Gas Detector Unit with an NDIR Infrared Sensor is suitable for indoor and outdoor use. The GSI 400 is suitable for the detection of refrigerants, methane, carbon dioxide and many other gases. It is also available in SIL and ATEX certified versions upon request.

GSP 300

Gas detector with pellistor sensor suitable for indoor and outdoor use. The GSP 300 is optimized for flammable gas concentrations.
Low cross sensitivity with a high variety of gas types and measuring ranges. GSP 300 can be used in all industrial sectors

Overview Gas Sensors BUS Topology

GSE 410

Gas detector for 1 electrochemical sensor unit for indoor and outdoor use suitable. The BUS gas sensor GSE 410 is designed for the detection of toxic or combustible gases as well as oxygen. Highest reliability, and maximum performance in one compact housing.
Factory calibration for all application-typical measuring ranges. Applicable in all industrial sectors.

GSE 420

Duo gas detector for 2 electrochemical sensors units suitable for indoor and outdoor use. The GSE 420 can be used for the parallel detection of toxic or combustible gases as well as oxygen. Highest reliability and maximum performance in a compact housing.
Factory calibration for all application-typical measuring ranges. Typical range of application in underground garages and multi-storey car parks as well as in all industrial areas.

For further information on our sensors, please contact us by telephone: +49 - (0)40 - 600 38 38 - 0 or by e-mail at htk@htk-hamburg.com

Gas Sensors

Technical Data		GSC 200	GSZ 300	GSE 400	GSI 400	GSP300	GSE 410	GSE 420	GSE ATEX
Measuring principle									
Electrochemical		●		●			●	●	
Zirconium oxide			●						
Infrared					●				
Pellistor						●			
Output signal		4 - 20 mA	4 - 20 mA	4 - 20 mA	4 - 20 mA	4 - 20 mA	RS485	RS485	4 - 20 mA
Voltage		18 - 36 V DC	18 - 36 V DC	18 - 36 V DC	18 - 36 V DC	18 - 36 V DC	18 - 36 V DC	18 - 36 V DC	18 - 36 V DC
Protection class		IP54/ IP65/ IP69K	IP54/ IP65/ IP69K	IP54/ IP65/ IP69K	IP54/ IP65/ IP69K	IP54/ IP65/ IP69K	IP 54	IP 54	
Gas access		Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion
Gas types									
Alcohols	R3COH			●			●	●	
Ammonia	NH3			●		●	●	●	
Bromine	Br2			●			●	●	
Hydrogen bromide	HBr			●			●	●	
Chlorine	CL2			●			●	●	
Chlorine oxide	CLO2			●			●	●	
Chlorinated water	HCl			●			●	●	
Hydrogen cyanide	HCN			●			●	●	
Ethylene	C2H4			●			●	●	
Ethylene oxide	C2H4O			●			●	●	
Formaldehyde	CH2O			●			●	●	
Refrigerants	R1234yf				●				
Refrigerants	R1234ze				●				
Refrigerants	R507A				●				
Refrigerants	R125				●				
Refrigerants	R134A				●				
Refrigerants	R404A				●				
Refrigerants	R407A				●				
Refrigerants	R407F				●				
Refrigerants	R410A				●				
Refrigerants	R449A				●				
Refrigerants	R417A				●				
Refrigerants	R448A				●				
Refrigerants	R452B				●				
Refrigerants	R452A				●				
Refrigerants	R32				●				
Refrigerants	R227				●				
Refrigerants	R234				●				
Refrigerants	R454B				●				
Carbon dioxide	CO2				●				
Carbon monoxide	CO			●			●	●	
Carbon disulphide	CS2			●					
Methane	CH4				●				
Ozone	O3			●			●	●	
Phosphine	PH3			●			●	●	
Propane	C3H8				●				
Oxygen	O2	●	●				●	●	
Sulphur dioxide	SO2			●			●	●	
Sulfur hex fluoride	SF6				●				
Hydrogen sulphide	H2S			●			●	●	
Silane	SiH4			●			●	●	
Nitrogen dioxide	NO2			●			●	●	
Nitrogen monoxide	NO			●			●	●	
Hydrogen	H2			●		●	●	●	
Hydrogen peroxide	H2O2			●			●	●	

For Information regarding ATEX sensors please contact us, we are happy to advise you.

Other gas types on request

Subject to technical modifications 09/2019

Commissioning & Maintenance of Gas Warning Systems

Introduction for the Englisch Version:

For the commissioning, maintenance and repair of the SCENTY® Gas Warning Systems, licensed software modules and a corresponding technical qualification are required. Our notes on German regulations do not necessarily apply in your country. The respective National Regulations for the safe handling of gases and the use of gas warning systems should be strictly observed. Worldwide we only work with authorized sales and service partners. Regular training and instruction ensure optimum safety and quality. We will be happy to put you in touch with our partners in your country.
Would you like to become our sales and service partner? Please contact us at any time!
On the following pages you will find the rules and regulations that apply to the German market. Please check the rules for your market.

Ex plants

Note: The information given on explosion protection concentrates on the essential points of individual regulations and rules, it does not, therefore list all the measures required in individual cases. Since the publication of these notes, the status of the technology and the legal bases may have changed. The following notes have been carefully prepared, nevertheless, It is the operator's obligation and responsibility to check the completeness, timeliness and accuracy of the information for themselves.
This information sheet is a compilation of practical experience to assist the user. Further information can be found in the standard DIN EN 60079-29-2 (VDE 0400-2):2008-07 and leaflet T055. The commissioning and maintenance cycles for gas warning systems for flammable gases are described in detail in leaflet T023 (BGI 518), „Gas warning devices for explosion protection, use and operation."

General information

When monitoring flammable gasses, gas warning devices (whether stationary, transportable or portable), must be used whenever there is a possibility of any risk to life and/or property from the accumulation of any combustible gas/air mixtures. Such equipment will enhance hazard reduction by detecting the presence of flammable gases and providing appropriate audible and/or visual warnings. They can also be used to trigger specific safety enhancements (e.g. ventilation, system shutdown or evacuation signs).

The information given in this data sheet provides information on
• Initial start-up
• Maintenance

Of electrically powered group II equipment intended for use in industrial and commercial safety applications for the detection and measurement of combustible gases and vapours or oxygen.

Licensed software modules for the commissioning, maintenance and repair of SCENTY gas detection systems and gas sensors are required as well as appropriate technical knowledge.

Initial commissioning of the gas warning system

Gas warning systems must be function tested by a competent person after installation. The scope should include a system check with a test of the gas response in conjunction with the test of the switching function to ensure that it works correctly. The results must be recorded.

Maintenance of the gas warning device

If you need more detailed information on the checking of gas warning devices it can be found in leaflets T023 and T021. Those who align their protective measures with the current guidelines and regularly check their compliance, are assured of the necessary protection when using gas detectors in operation. Those who do not must take a risk assessment to ensure their installation meets the same safety level. The details of this risk assesment must be recorded!
In order to maintain the functionality of a gas warning system, regular maintenance is necessary, specialist knowledge is required. If the operator does not have this knowledge, he must contact the manufacturer, specialist or testing institution, who have the necessary knowledge of the gas warning system used. The information and recommendations in the operating instructions of the manufacturer must be observed. The calibration and testing results and evaluation as well as any adjustment and repair work carried out must be documented.

Commissioning & Maintenance of Gas Warning Systems

The control cycles (maintenance) and the work to be carried out are specified as follows:

Visual inspection (instructed person)

- Checking the sensors for mechanical damage
- Checking the gas inlet opening for contamination
- Control of the operating display and status messages e.g. on/off, alarm, GSM
- Recording the following:
- Identification of the GWA (Series No., Type)
- Confirmation of implementation
- Interval: 1 month

Information sheet IB SV TOX HTK V 3.1_2013 function check (qualified personnel)

- Visual check
- Control and evaluation of the measured value display and adjustment if necessary
- Check and evaluation response time - if necessary replace sensor
- Control and triggering of test functions for display elements without triggering of switching functions
- Recording shall include the following:
- Identification of the GWA (Series No., Type)
- Measuring gases
- Display for zero and test gas actual and target state
- Evaluation of response times
- Defects found
- Work carried out
- Confirmation of implementation
- Interval: 6 months

System control (competent person)

- Functional check
- Control of all safety functions including triggering of switching functions
- Control of the gas response by target/actual comparison
- Control of the reporting and recording equipment
- Identification of the GWA (Series No., Type)
- Identifikation der GWA (Serien Nr., Typ)
- Measuring gases
- Deviation of the gas response
- Display for zero and test gas actual and target state
- Evaluation of response times
- Defects found
- Work carried out
- Confirmation of implementation
- Interval: 12 months

Note: Gas detectors are work equipment as specified in the second section of the Ordinance on Industrial Safety and Health (BetrSichV). The equipment detailed in this information sheet covers the scope of testing required for the work equipment in accordance with TRBS1201. Gas warning devices with a measuring function for explosion protection as described here are part of a higher-level safety concept for a plant with potentially explosive atmospheres. As these systems requiring monitoring, they fall under the provisions of the BetrSichV. The inspections described here do not replace the need for inspection of the entire system requiring monitoring. However, they have been designed in this way such that the results are incorporated into the audit in accordance with BetrSichV and TRBS 1201 Part 1 and used within the framework of an existing audit concept. The intervals between checks given in this information sheet are valid for a wide range of cases. If shorter inspection periods are required as a result of the risk assessment in accordance with §3 Para. 3 of the BetrSichV, these shall be used for monitoring the gas warning device!

Commissioning & Maintenance of Gas Warning Systems

Toxic plants

Note: The information given for the „Measuring and warning devices for hazardous gas concentrations“ covers the essential points of the individual regulations and rules. It therefore does not list all the measures required in specific cases. Since the publication of this information sheet guidelines and regulations may have changed, please check this before proceeding. The following notes have been carefully prepared. Nevertheless, the operator retains the obligation and responsibility to check the completeness, timeliness and accuracy of the information. This information sheet is a compilation of practical experience intended to assist the user. Further information can be found in the standard DIN EN 45544-4 (VDE 0400-22-4) and the leaflet T055. The commissioning and maintenance cycles for gas warning systems for flammable gases are described in leaflet T021 (BGI 836), gas warning systems for toxic gases/vapours and oxygen, use and operation, in detail.

General information

Gas warning devices, whether stationary, transportable or portable, must be used whenever the potential accumulation of gases and/or gas mixtures could pose a threat to life or infrastructure.
Gas warning devices reduce the potential dangers by detecting the presence of hazardous gas concentrations and providing appropriate acoustic and/or optical warnings. They can also be used to trigger specific safety precautions (e.g. ventilation, system shutdown or evacuation).

The information given in this data sheet provides guidence on
- Initial start-up
- Maintenance

of electrically operated group II equipment intended for use in industrial and commercial environments for Safety applications for the detection and measurement of toxic gases and vapours or oxygen.

Licensed software modules for the commissioning, maintenance and repair of SCENTY gas detection systems and gas sensors are required as well as appropriate technical knowledge.

Initial commissioning of the gas warning system

Gas warning systems must be function tested by a competent person after installation. The scope should include a functional gas check in conjunction with the test of the switching system to ensure that it works correctly. The results must be recorded.

Maintenance of the gas warning device

If you need more detailed information on the checking of gas warning devices, it can be found in leaflets T023 and T021. Those who ensure that their protective measures comply fully with all current guidelines and regularly check their compliance, are assured of the necessary protection when using gas detectors in operation. Those who do not must undertake a risk assessment in order to ensure that their installation meets the same safety level. The details of this risk assesment must be recorded.

In order to maintain the functionality of a gas warning system, regular maintenance is necessary and specialist knowledge is required. If the operator does not have this knowledge, he must contact the manufacturer, specialist or testing institution, who has the necessary knowledge of the gas warning system used. The information and recommendations in the operating instructions of the manufacturer must be observed.
The calibration and testing results and evaluation as well as any adjustment and repair work carried out must be documented.

Commissioning & Maintenance of Gas Warning Systems

The control cycles (maintenance) and the work to be carried out are specified as follows:

Visual inspection (instructed person)

- Checking the sensors for mechanical damage
- Checking the gas inlet opening for contamination
- Control of the operating display and status messages e.g. on/off, alarm, GSM
- Recording the following:
- Identification of the GWA (Serial No., Type)
- Confirmation of implementation
- Interval: 1 month

Information sheet IB SV TOX HTK V 3.1_2013 Function check (qualified personnel)

- Visual check
- Control and evaluation of the measured value display and adjustment if necessary
- Check and evaluate response time. Replace sensor if required
- Control and triggering of test functions for display elements without triggering of switching functions
- Recording shall include the following:
- Identification of the GWA (Serial No., Type)
- Measuring gases
- Display for zero and test gas actual and target state
- Evaluation of response times
- Defects found
- Work carried out
- Confirmation of implementation
- Interval: 6 months

System control (competent person)

- Functional check
- Control of all safety functions including triggering of switching functions
- Control of the gas response by target/actual comparison
- Control of the reporting and recording equipment
- Recording shall include the following:
- Identification of the GWA (Serial No., Type)
- Measuring gases
- Deviation of the gas response
- Display for zero and test gas actual and target state
- Evaluation of response times
- Defects found
- Work carried out
- Confirmation of implementation
- Interval: 12 months

Note: Gas detectors are classified as work equipment as specified in the second section of the Ordinance on Industrial Safety and Health (BetrSichV). The equipment detailed in this information sheet covers the scope of testing required for the work equipment in accordance with TRBS1201.
Gas warning devices with a measuring function as described here are part of a higher-level safety concept for a plant with potentially explosive atmospheres. As these systems require monitoring, they fall under the provisions of the BetrSichV.
The inspections described here do not replace the need for inspection of the entire system requires monitoring. However, they have been designed in this way such that the results are incorporated into the audit in accordance with BetrSichV and TRBS 1201 and used within the framework of an existing audit concept. The intervals between checks given in this information sheet are valid for a wide range of cases.

If shorter inspection periods are required as a result of the risk assessment in accordance with §3 Para. 3 of the BetrSichV, these shall be used for monitoring the gas warning device!

Scope of maintenance

Maintenance work carried out by HTK Hamburg includes visual and functional checks in accordance with leaflets T021 (BGI836) and T023 (BGI518) of BG RCI and comprise the following activities:

- Checking the transducers for mechanical damage
- Checking the sensors for contamination (diffusion measuring head)
- Calibration and adjustment of sensors with zero and test gases
- Testing the response of sensors
- Checking the operating display and status messages
- Testing the display of the gas warning system

The following supporting activities for the system control according to the bulletins of BG RCI can only be carried out in coordination with and in the presence of the plant operator. After approval by the operator, the following points can be checked:

- Control of the connected signal transmitters (e.g. fan, horn or illuminated banner etc. - alarm triggering)
  Information sheet IB SV TOX HTK V 3.1_2013
- Testing the switching contacts (only switching contacts are tested, not the connection to the device being triggered)
- Status of the GWA emergency power supply if supplied

General information

Documentation

All results of the maintenance activity are documented on the service report. The service report is generated after completion of the maintenance activity and presented to the operator.

Additional items

These include rectification of defects, replacement of spare parts, safety instructions, addional time spent, (directing and waiting times etc.). These will be invoiced separately. It is necessary to remedy any defects found in the gas warning system without delay. The spare parts required for this as well as additional expenses are not part of the maintenance and will be charged separately.

Responsibility for the gas warning system (system responsibility)

HTK Hamburg GmbH assumes no responsibility for the function of the entire system. The responsibility for the function of the system remains with the operator.

Note on external systems

In the event of a defect in third-party system components, these will, if possible, be replaced by components from HTK Hamburg GmbH. Should parts not be replaceable a separate offer for the replacement of the entire system will be provided as required.

Commissioning & Maintenance of Gas Warning Systems

Note on gas sensors

Gas sensors can be damaged by coffee powder, fine dust, silicone vapours or oily air. This does not constitute a warranty claim. Should it be possibile that one or more of the substances referred to may be present in the monitoring areas, an exchange of the sensors may be necessary for sensors with a different measuring method.

Software required for maintenance

Commissioning and maintenance of SCENTY® gas warning systems can only be carried out with the appropriate software module.

Interpretation of the GWA

The on-site risk assessment must be carried out prior to the construction of the gas warning system, as other requirements may be needed for the specific plant.
The design of the entire warning system is based on customer specifications and is therefore without guarantee and without claim to completeness.

All adjoining rooms shall be included in the monitoring and ventilation, provided there is no overpressure. Within the framework, the risk assessment and procedural instructions must be clarified by an expert on site.
Gas warning systems must have an independent, uninterruptible power supply.

Best practice dictates that gas warning systems must be equipped with emergency stop buttons.
It should be noted that appropriate ventilation is required for the rooms. In the case of heavy gases, for example, floor extraction is required, for light gases, a ceiling extraction system. The fans must be designed according to the specific requirements, possibly requiring explosion-protected variants to be used.
The definition will be made within the framework of the risk assessment.

The consultation and planning as well as the design and function of the system is based on the values and specifications provided by the customer. Our advice is non-binding. Any liability on our part is excluded.

Once the design of the GWA, the number of sensors and the installation site have been determined by the customer, we recommend that you send us a room plan with the following information providing the relevant details (inputs, ventilation, installation site) in order to check the design of the system.

In order to ensure the correct function of the system, commissioning by HTK is required.

Accessibility Gas warning system

The gas detectors must be accessible. Any necessary scaffolding, risers, etc. must be provided by the client and the accident prevention regulations (UVV) must be adhered to. Maintenance shall be carried out assuming that access to the system is possible without third party manufacturers software.

Degree of protection

Protection types IP54 and IP65 are detailed in our proposals. We generally recommend the use of IP65 Units in wet areas.

Extracts from the BG Regulations, Leaflets T021, T023, T055

Basis BG Regulations, Leaflet T021, T023, T055

1. Gas warning devices (GWA) shall be used whenever the presence of gases pose a danger to people and the wider environment.

2. Gas warning devices intended to warn of oxygen deficiency or enrichment are also within the scope of application of T021 and T023. An oxygen measurement shall be carried out in order to determine whether the oxygen concentration has fallen below a safe breathable level or when high concentrations pose a danger.

3. The following laws, regulations, technical rules for the use of gases and gas warning devices shall be observed:
Industrial Safety Ordinance, TRBS 1201, TRBS1203, Chemicals Act (ChemG), Hazardous Substances Ordinance (GefStoffV), Technical rules for hazardous substances (TRGS), TRGS 402, TRGS 900, Professional Association Regulation Leaflet T021, T023, T055.

4. The operator is legally obliged to prepare a risk assessment. The risk assessment will determine if the use of a GWA is necessary, e.g. because the ventilation is not sufficient, does not exist at all or is not technically monitored. In these cases the use of a GWA is mandatory!

5. According to the BG guidelines, a system and function test must be carried out at least twice a year by a competent person. These tests must be documented and archived by the contractor.

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