INOSENT
GAS DETECTION

UNDERGROUND CAR PARK

INOSENT the brand for
reliable gas detection systems.

INOSENT
GAS DETECTION

COMPANY

WE ARE INOSENT

Our products are defined by creativity along with constant development. Our goal is to always deliver our customers the best solution while striving to create an excellent enduring working relationship. Trust, fairness and dependability are our highest priorities. At Inosent, we are firmly convinced that the best solutions can only be found through loyal, courteous consultation and collaboration. At the same time, we are always open to new ideas and we enjoy exciting challenges. INOSENT is authentic, fair – and always there for you.

OUR CUSTOMERS ARE IMPORTANT TO US

Our constant enthusiasm for our work is also the result of our belief in the value of genuine co-operation with our customers. We will give you honest advice that makes it possible for you to profit from our knowledge of the latest technical possibilities. Because, at the end of the day, even a technical field like gas detection technology is about human beings who are working with each other and for each other. And because of that, the honest relationship to our customers and the serious interaction with our customers is the most important thing for Inosent. INOSENT has time for you – and is always there for you.

WE LIKE TO FIND NEW PATHS

The world is in constant change – and, in technical fields above all, it is important to meet new possibilities with enthusiasm and creativity. When safety is the primary objective, the continual development of systems and solutions work in tandem with this goal. That is why we, at Inosent, keep our enthusiasm for innovation, and work both creatively and carefully on new solutions that can better satisfy our customers' requirements. INOSENT has time for you – and is always there for you.

For more information, please visit www.inosent.ch

INOSENT
GAS DETECTION

AREAS OF APPLICATION

INOSENT the brand for reliable gas detection systems.

In the workplace, gas detection systems are an indispensable safety asset across a spectrum of industrial processes. Consider the routine daily use of gases in heating and refrigeration equipment in addition to the dangerous gaseous produced from processes such as, fermentation, incineration, engine combustion to name but a few. These gases can be explosive or toxic as well as colourless, odourless and tasteless. Gases and their presence in ambient air must therefore, be accurately and professionally monitored continuously on a 24-hour basis.

INOSENT offers you intelligent, comprehensive solutions within a wide scope of industrial applications. We will support you with constructive and competent advice so that you can plan for the highest levels of safety.

COOLING SYSTEMS

IN GENERAL, THE FOLLOWING GASES WILL BE MONITORED:

(H)FKW | HFO | C_3H_8 | CO_2 | NH_3

WE RECOMMEND:

- INOSENT EASY
- INOSENT ULTIMATE
- INOSENT COMPACT

UNDERGROUND CAR PARK

IN GENERAL, THE FOLLOWING GASES WILL BE MONITORED:

CARBON MONOXIDE CO
NITROGEN DIOXIDE NO_2

WE RECOMMEND:

- INOSENT COMPACT
- INOSENT ULTIMATE

GAS HEATING

IN GENERAL, THE FOLLOWING GASES WILL BE MONITORED:

METHANE CH_4 | PROPANE C_3H_8

WE RECOMMEND:

- INOSENT CLASSIC

LABORATORY

IN GENERAL, THE FOLLOWING GASES WILL BE MONITORED:

O_2 | CO | H_2 | CO_2 | NH_3 | C_3H_8
O_3 | SIH_4 | PH_3 | ECT.

WE RECOMMEND:

- INOSENT ULTIMATE

INDUSTRY
ATEX ZONE 1 & 2
SIL 1 & SIL 2

IN GENERAL, THE FOLLOWING GASES WILL BE MONITORED:

NH_3 | SOLVENTS | C_3H_8
CH_4 | H_2 | ECT.

WE RECOMMEND:

- INOSENT PREMIUM
- INOSENT ULTIMATE

INOSENT
GAS DETECTION

PRODUCT LINES

EASY

A simple, very high-quality, stand-alone compact solution for small systems:
24 VDC/AC or 230 VAC | LED status display | 85 dB-Alarm Horn
2 Relay outputs | 4-20mA, 0–10VDC, Modbus RTU | IP 65 Protected

COMPACT

The ideal solution for monitoring CO and NO2 as well as humidity in underground garages:

24 VDC | 32 BUS-Inputs for gas detectors and alarm lights | 4 digital signal inputs| LCD-Display | 8 relays outputs | Modbus RTU | WIFI interface

CLASSIC

Efficient gas monitoring monitor in a wall-mounted housing for 2, 4 or 6 gas detectors:

24 V DC/AC or 230 VAC | 2, 4 or 6 × 4–20mA-Input | LCD-Display
4 Relay outputs | IP 65 Protected | incorporated data logger

ULTIMATE

A versatile, intelligent gas detection system with an innovative visual display of parameters on a touch screen:

24 VDC | 90 Inputs for gas detectors, alarm lights and accessories | 7'' Touch-Display | USB/ RJ45-Connection | 8 Relay outputs, expandable Modbus RTU/TCP outputs, optional 0-10VDC or 4-20mA

PREMIUM

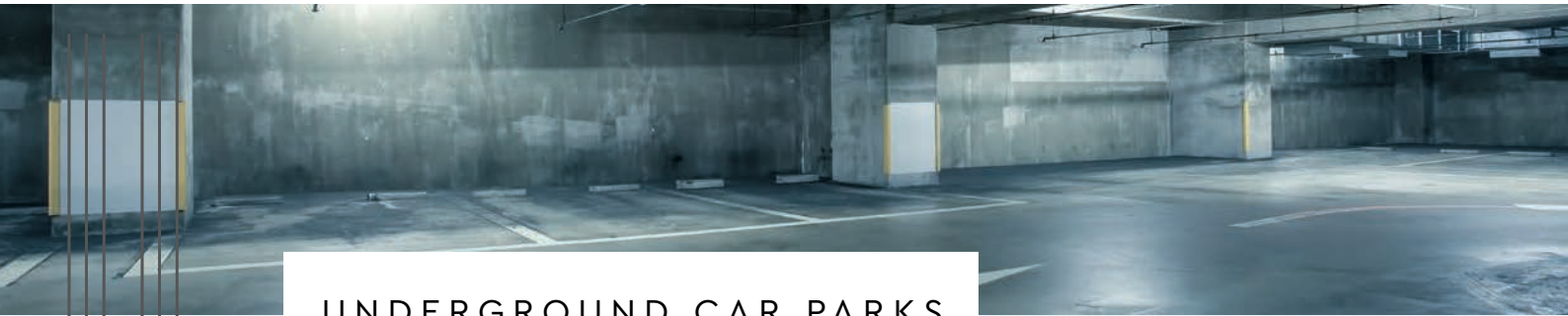A powerful, multi-functional gas detection system specially designed for SIL1 or SIL2 systems:

24 VDC | 256 Inputs for gas detectors (BUS or 4–20mA)
LCD-Display | 8 Relay outputs, expandable | 19''-Rack or metal box
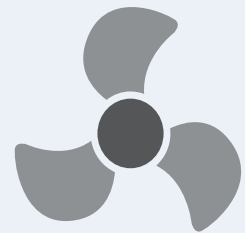incorporated data logger

PORTABLE

Blackline Safety: Wide range of gas sensors and accessories.
Alarm forwarding with location information by e-mail and SMS.

Riken Keiki: Mobile single-gas and mulit-gas devices, extremely robust, smallest and lightest five-gas meter in the world.

UNDERGROUND CAR PARKS

In underground car parks, carbon monoxide (CO) and nitrogen dioxide (NO_2) gases must be accurately monitored. If the CO or NO_2 concentration increases, perhaps due to increased traffic in the area, there will be an acute risk of poisoning. Control of humidity is also a central requirement in underground car parks. A gas detection system for underground car parks must combine these requirements in the best possible way.

INOSENT RECOMMENDS THE «**ULTIMATE**» PRODUCT LINE FOR UNDERGROUND CAR PARKS.
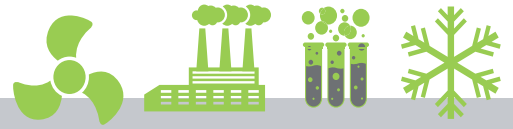
Thanks to state-of-the-art technology and a sophisticated design, «**ULTIMATE**» is the ideal solution. Exhaust gas warning lights with built-in horns are activated immediately when danger threatens, so that no one is at risk. There is also a display icon showing the correct behaviour in the case of alarm. For the differential humidity control, it is necessary to have an absolute humidity detector within the car park and a second detector outside: This is how the Ultimate product line ensures the best control of ventilation and humidity.

The CO and NO_2 detectors are, like the two moisture detectors, connected to the control centre. The control centre displays the highest measured levels as well as any alarms or malfunctions. The display also shows, at all times, the updated status messages from the smoke detectors and / or the differential pressure detectors. The Ultimate product line is also easy to program and easy to install.

EASY TO INTEGRATE, WITH AN IDEAL DESIGN FOR UNDERGROUND CAR PARKS: THE «**ULTIMATE**» PRODUCT LINE

- RELIABLE MONITORING OF CARBON MONOXIDE AND NITROGEN DIOXIDE
- PERFECT HUMIDITY CONTROL
- ULTIMATE CONTROL PANEL
- GAS DETECTORS FOR MONITORING CO AND NO_2; OTHER DETECTORS CAN BE CONNECTED
- LED-LIGHT WITH INTEGRATED ALARM HORN

INOSENT
ULTIMATE

INOSENT ULTIMATE
WITHOUT DIGITAL ALARM UNITS
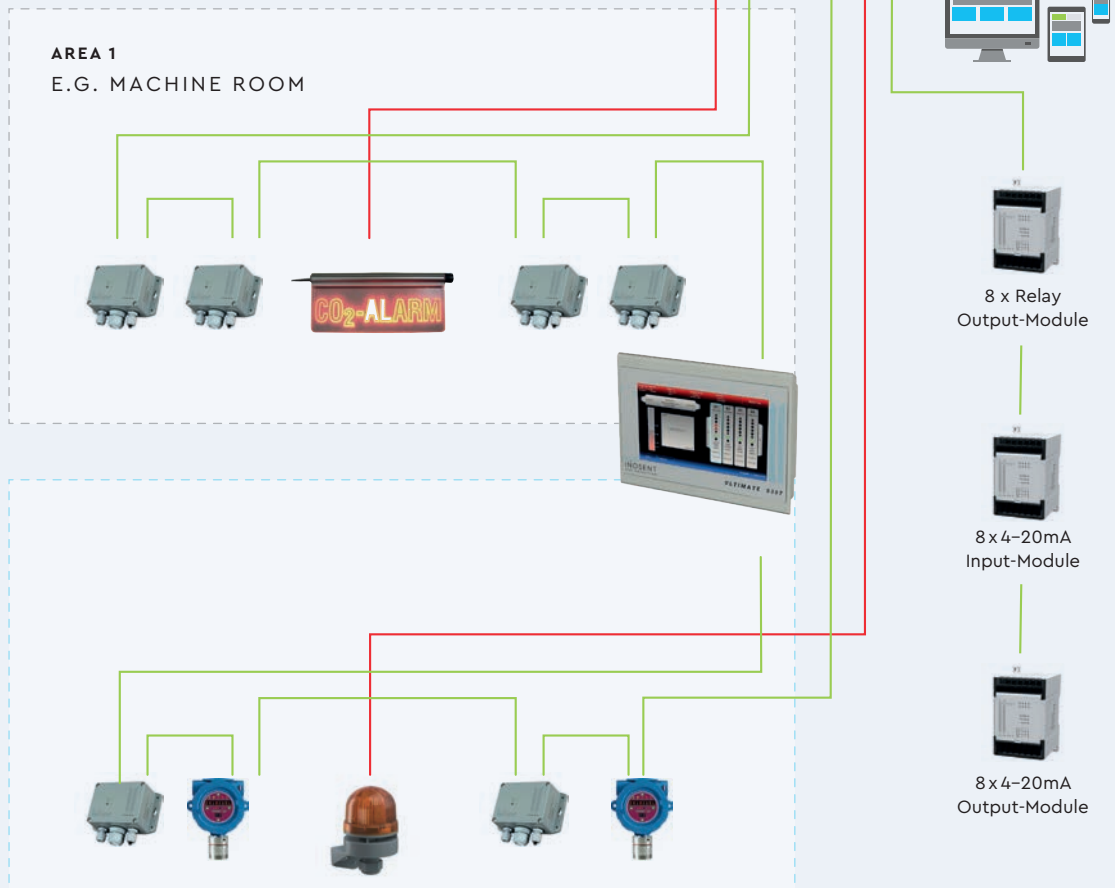
SIGNAL:
MODBUS

MAX. QUANTITY GAS DETECTORS:
90

— SUPPLY TO ALARM UNITS
24 VDC or 230 VAC

— SUPPLY TO GAS DETECTORS:
INOSENT MODBUS-CABLE LI HCH:
Modubs-Cable IMK 21275 ($2 \times 1\,mm^2$; $2 \times 0{,}75\,mm^2$, shielded, coloured) max. 1200 m

— ETHERNET-CONNECTION:
8-pin RJ45, 10/100 Mbps, Auto MDI/MDIX,
Auto-Negation

AREA 1
E.G. MACHINE ROOM

CO₂-ALARM

8 x Relay
Output-Module

8 x 4–20mA
Input-Module

8 x 4–20mA
Output-Module

INOSENT
ULTIMATE

INOSENT ULTIMATE
WITH DIGITAL ALARM UNITS

SIGNAL:
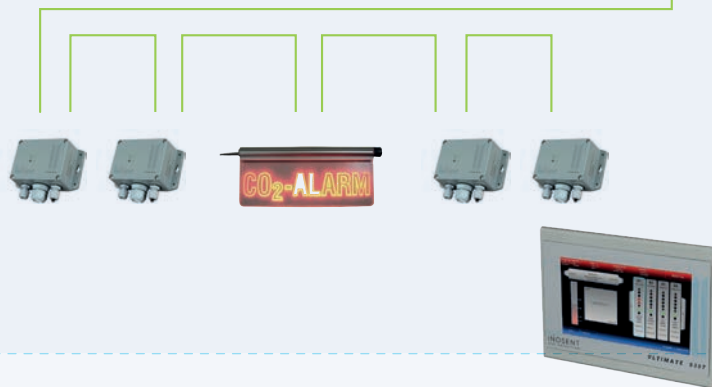# MODBUS

MAX. QUANTITY GAS DETECTORS:
90

— SUPPLY TO GAS DETECTORS AND ALARM UNITS:
INOSENT MODBUS-CABLE LI HCH:
Modubs-Cable IMK 21275 (2 × 1 mm²; 2 x 0,75 mm²,
shielded, coloured) max. 1200 m

— ETHERNET-CONNECTION:
8-pin RJ45, 10/100 Mbps, Auto MDI/MDIX,
Auto-Negation

AREA 1
E.G. MACHINE ROOM

CO₂-ALARM

AREA 2
E.G REFRIGERATION PLANT

WWW

8 × Relais
Output-Module

4-20mA
Input-Module

4-20mA
Output-Module

INOSENT
ULTIMATE

ULTIMATE 5307

The Ultimate product line has been designed specifically for monitoring the concentration of gases. The gas monitor has an integrated 7-inch touch screen for the graphical display, for operation and for programming. In addition, logging of gas concentration levels, alarms and malfunctions, as well as a web server and a MODBUS RTU output for communication with the building control system, are all integrated into the Ultimate system.

OVERVIEW:

- 2 YEARS WARRANTY
- PRACTICAL BUILT-IN INSTALLATION
- 7-INCH TOUCH-SCREEN DISPLAY
- ADDITIONAL TOUCH DISPLAYS CAN BE CONNECTED ON THE SAME BUS
- SIMPLE PROGRAMMING DIRECTLY ON THE TOUCH-SCREEN
- UP TO 50 BUS COMPONENTS

- EMBEDDED WEB SERVER
- INTEGRATED LOGGING OF GAS CONCENTRATIONS, ALARMS AND MALFUNCTIONS
- DISPLAY OF MEASURING RANGES, ALARM LEVELS AND ALARM GROUPS
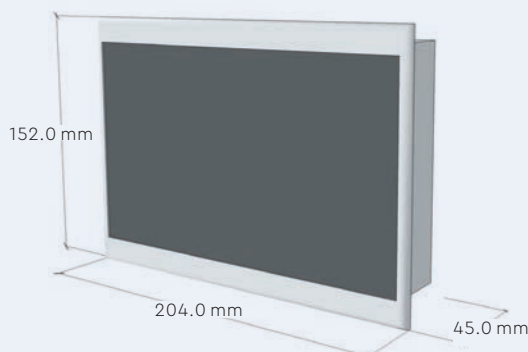- MAK VALUE MODE FOR NATIONAL DIRECTIVE-COMPLIANT LABORATORY MONITORINGS

TECHNICAL SPECIFICATIONS

SUPPLY VOLTAGE: 24 VDC | Status display for operation and malfunctions on a well-organised colour display | USB- and SD-Card-interface | RJ-45 connector for the web viewer | **DIGITAL SIGNAL INPUT:** 90 x digital via RS485 BUS-ports | 8 external relay contacts on the expansion module | 8 × 4-20mA analogue signal inputs on the expansion module | **AVAILABLE ACCESSORIES:** Modbus-enabled LED alarm light with integrated horn, Expansion modules for additional relay outpouts or analogue inputs
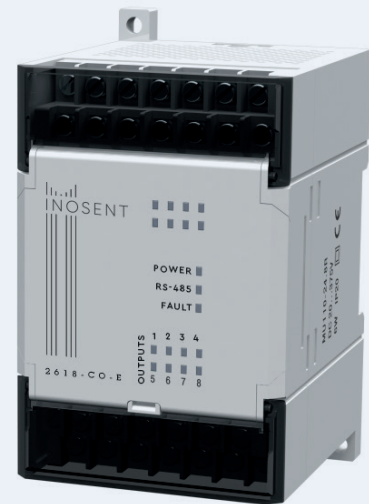
DIMENSONS AND CONNECTIONS

152.0 mm

204.0 mm

45.0 mm

RELAY OUTPUT MODULE
TYPE I7110-8R

The Modbus I7110-8R relay output module controls eight independent electromagnetic relays according to incoming digital data:

- 8 output relays 4A 250 VAC OR 24 VDC
- Universal 230 VAC / 24 VDC power supply
- RS485 Modbus RTU-Interface
- DIN-rail or wall mount

RELAY OUTPUT MODULE (SPECIFICATIONS)

SUPPLY VOLTAGE: 90...264 VAC/ 20...375 VDC
POWER CONSUMPTION : <6 VA
WIRING: 2×2×0,75 mm2, shielded
NUMBER OF OUTPUTS: 8
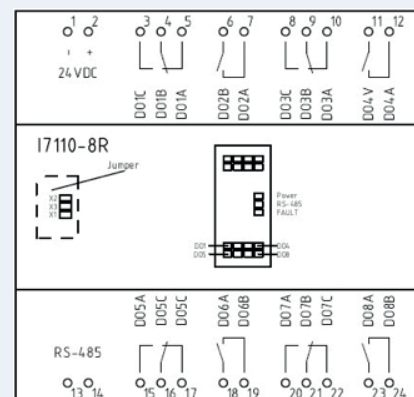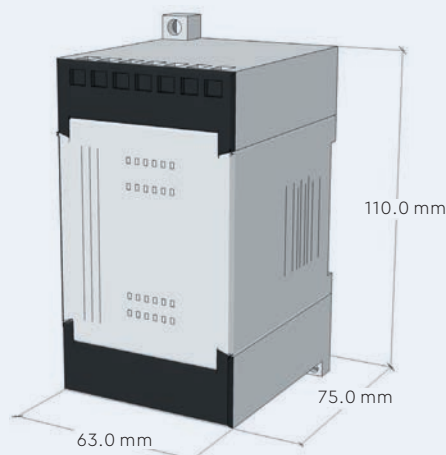**OUTPUT TYPE :** Electromagnetic relay, 4A 250 VAC or 24 VDC
PROTECTION CLASS: IP 20
OPERATING CONDITIONS: -10...+55 °C, < 80 % RH
WEIGHT: 400 gr
CERTIFICATIONS: CE

DIMENSIONS AND CONNECTIONS

INOSENT
GAS DETECTION

COMBINED CO/NO2-DETECTOR I2660-CO+NO2

The combined Gas detector is designed for the detection of Carbon Monoxide CO and Nitrogen Dioxide NO2 and will be mainly used in underground car parks. The Gas detector provides analogue (4-20mA and 0-10VDC) and digital (Modbus RTU) output signals. The supply of the gas detector is 24VDC or 230VAC with the optional available power supply. The light grey ABS plastic enclosure is IP 65 protected and the internal sensor can be easily replaced when its life time is over.
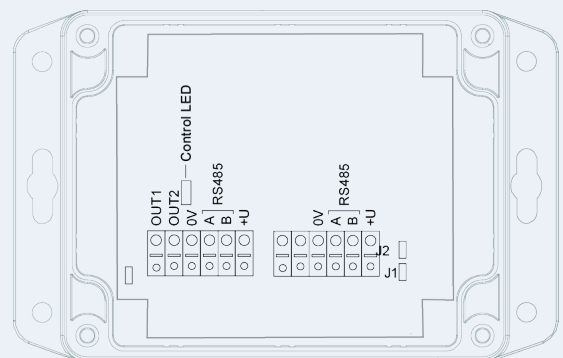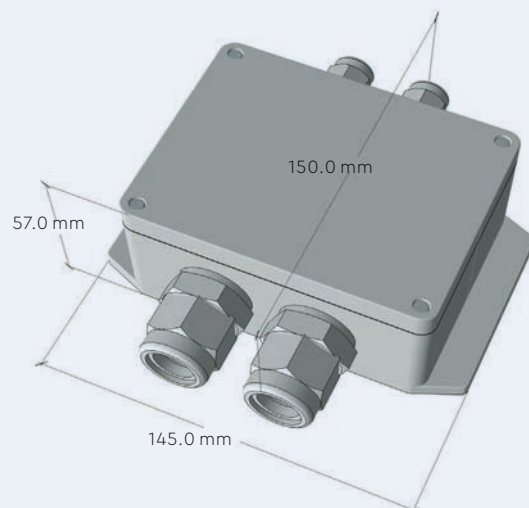
SPECIFCATIONS ELECTRONICS

SUPPLY: 11...30 VDC | **POWER CONSUMPTION:** max. 60 mA | **WIRING ANALOGUE/DIGITAL:** 3×0,75 mm2, shielded, 2×2×0,75 mm2, shielded | **SIGNAL-OUTPUT ANALOGUE/DIGITAL:** 2×4...20 mA, 2×0-10VDC, Modbus RTU | **WEIGHT:** 500 gr | **CERTIFICATES:** CE

SPECIFCATIONS CO+NO2-SENSOR

MEASURING PRINCIPLE: Electrochemical | **MEASURING RANGE:** 0...300 ppm CO/ 0...10 ppm NO2 **ACCURACY:** +/- 3 % of measuring range | **RESPONSE TIME:** t 90: < 60 sec | **OPERATION TEMPERATURE:** -20 °C ...+50 °C | **HUMIDITY:** 14...90 % (non condensing) | **SIGNAL DRIFT:** < 1 % Signal/Month **APPROX. LIFETIME AT 20°C:** > CO-measuring cell approx. 6 – 8 years; NO2-measuring cell approx. 3 – 4 years depending on applicaton | **CALIBRATION:** It is necessary to recalibrate the gas detector at least once a year.

DIMENSIONS AND ELECTRONICS

INOSENT
GAS DETECTION

IP65

NITROGEN MONOXIDE-DETECTOR I2608-NO-E

The Gas detector is designed for the detection of Nitrogen Monoxide NO and provides 2 internal relay outputs for ventilation control and alarm, a 85 dB Alarm buzzer and an LED alarm indicator. The Gas detector provides analogue (4-20mA and 0-10VDC) and digital (Modbus RTU) output signals. The supply of the gas detector is 24 VDC or 230 VAC and can also be operated „standa-lone" without any gas monitor. The light grey ABS plastic enclosure is IP 65 protected and the internal sensor can be easily replaced when its life time is over. Optionally the Gas detector is also available with an remote sensor, integrated dis-play or in a neutral IP20 enclosure for Indoor-Ins-tallation.
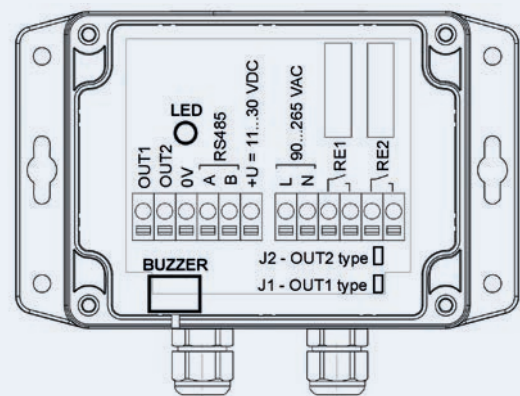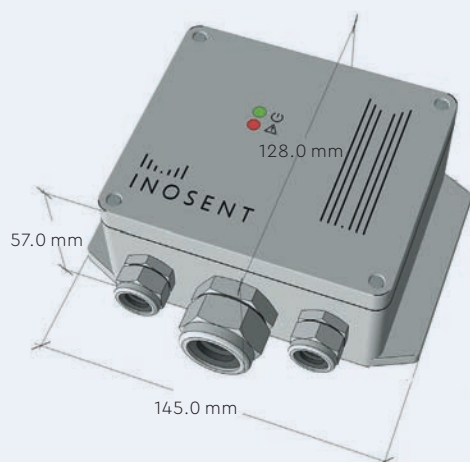
SPECIFCATIONS ELECTRONICS

SUPPLY: 11...30 VDC (optional 24 VAC or 90...265 VAC) | **POWER CONSUMPTION:** max. 60 mA **WIRING ANALOGUE/DIGITAL:** 3×0,75 mm2, shielded, 2×2×0,75 mm2, shielded | **SIGNAL-OUTPUT ANA-LOGUE/DIGITAL:** 4...20 mA, 0...10VDC, Modbus RTU | **RELAY OUTPUTS:** 2 SPST (250 VAC/ 30 VDC, 5A max) **WEIGHT:** 500 gr | **CERTIFICATES:** CE

SPECIFCATIONS SENSOR

MEASURING PRINCIPLE: Electrochemical | **MEASURING RANGE:** 0...250 ppm **ACCURACY:** +/- 2 % of measuring range | **RESPONSE TIME:** t 90: < 60 sec | **OPERATION TEMPERATURE:** -30 °C ...+50 °C | **HUMIDITY:** 15...90 % (non condensing) | **SIGNAL DRIFT:** < 2 % Signal/Month **APPROX. LIFETIME AT 20°C:** > 1 year, depending on applicaton | **CALIBRATION:** It is necessary to reca-librate the gas detector at least once a year.

DIMENSIONS AND ELECTRONICS

128.0 mm

57.0 mm

145.0 mm

OUT1 OUT2 0V A B RS485 +U = 11...30 VDC L N 90...265 VAC RE1 RE2

LED

BUZZER

J2 - OUT2 type
J1 - OUT1 type

PROPANE-DETECTOR
I2608-C3H8-S

The Gas detector is designed for the detection of Propan C3H8 and provides 2 internal relay outputs for ventilation control and alarm, a 85 dB Alarm buzzer and an LED alarm indicator. The Gas detector provides analogue (4-20mA and 0-10VDC) and digital (Modbus RTU) output signals. The supply of the gas detector is 24 VDC or 230 VAC and can also be operated „standalone" without any gas monitor. The light grey ABS plastic enclosure is IP 65 protected and the internal sensor can be easily replaced when its life time is over. Optionally the Gas detector is also available with an remote sensor, integrated display or in a neutral IP20 enclosure for Indoor-Installation.
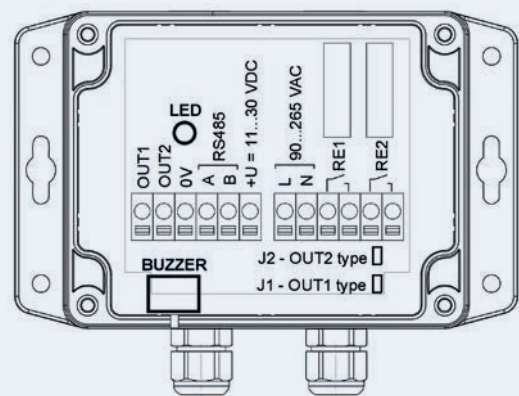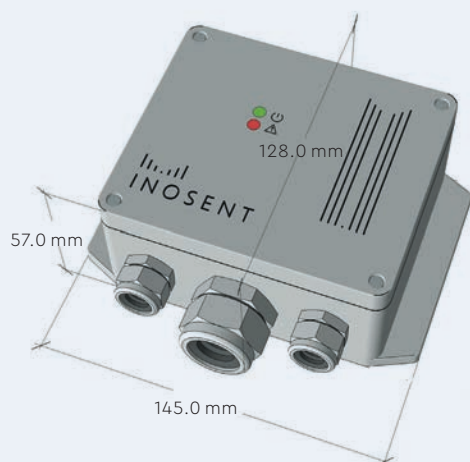

SPECIFCATIONS ELECTRONICS

SUPPLY: 11...30 VDC (optional 24 VAC or 90...265 VAC) | **POWER CONSUMPTION:** max. 60 mA
WIRING ANALOGUE/DIGITAL: 3×0,75 mm2, shielded, 2×2×0,75 mm2, shielded | **SIGNAL-OUTPUT ANALOGUE/DIGITAL:** 4...20 mA, 0...10VDC, Modbus RTU | **RELAY OUTPUTS:** 2 SPST (250 VAC/ 30 VDC, 5A max) **WEIGHT:** 500 gr | **CERTIFICATES:** CE

SPECIFCATIONS SENSOR

MEASURING PRINCIPLE: Semiconductor | **MEASURING RANGE:** 0...100 % LEL | **ACCURACY:** +/- 3 % of measuring range | **RESPONSE TIME:** t 90: < 15 sec | **OPERATION TEMPERATURE:** -40 °C ...+70 °C
HUMIDITY: 0...95 % (non condensing) | **SIGNAL DRIFT:** < 1 % Signal/Month
APPROX. LIFETIME AT 20°C: > 10 years, depending on applicaton | **CALIBRATION:** It is necessary to recalibrate the gas detector at least once a year.

DIMENSIONS AND ELECTRONICS

INOSENT
GASWARNTECHNIK

HUMIDITY AND TEMPERATURE DETECTOR I2238-W

The detector is used to measure relative and absolute humidity and temperature. It is characterized by a high repeatability and stability. The detector has analogue and digital output signals. The plastic housing is splash-proof (IP 65), which allows the detector to be mounted outdoors. The detector can optionally be ordered as a duct mounting version (DM) or as a version with remote sensor.
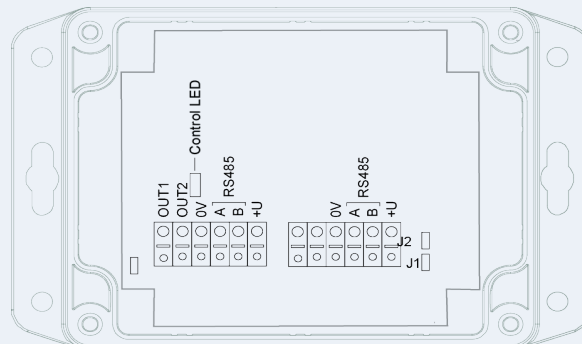
SPECIFCATIONS ELECTRONICS

SUPPLY: 11...30 VDC | **POWER CONSUMPTION:** max. 60 mA | **WIRING ANALOGUE/DIGITAL:** 3×0,75 mm2, shielded, 2×2×0,75 mm2, shielded | **SIGNAL-OUTPUT ANALOGUE/DIGITAL:** 4...20 mA, 0-10VDC, Modbus RTU | **WEIGHT:** 500 gr | **CERTIFICATES:** CE

SPECIFCATIONS SENSOR

MEASURING PRINCIPLE:	0...100 % rH, 0...300 g/m3 absolute humidity, -40...+85 °C
MEASURING RANGE:	±2,5 %rH/ ±0,3 °C
OPERATION TEMPERATURE:	-40 °C ... +85 °C
HUMIDITY:	0...95 % (non condensing)
RESPONSE TIME:	t 90: < 15 sec
APPROX. LIFETIME:	> 10 Jahre, depending on the application

ELECTRONICS

LED-WARNING SIGN WITH HORN TYPE I60 (BUS-COMPATIBLE)

The 60 cm long LED-Sign with bright red LED's may be used for most types of Gas Alarm. The LED-Sign can be used with a flashing or a continuous light and includes the option to pre-select text or pictograms in different colours, depending on the client's request. The supply voltage of the LED-Sign is 24VDC and it incorporates a 92dB Alarm horn, which can be controlled separately from the LED's.
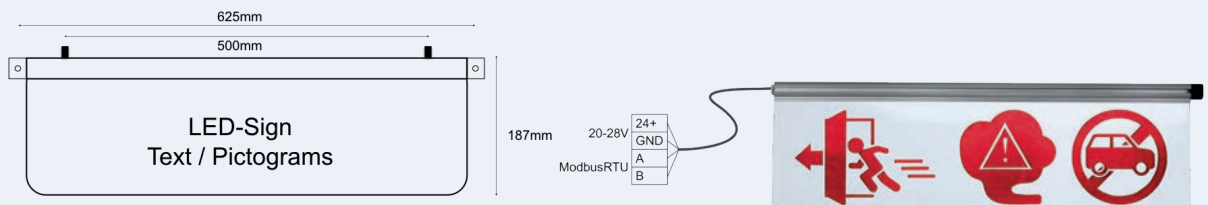
The LED-Sign in combination with the INOSENT BUS-compatible 'Ultimate' or 'Compact' controller allows for independent programming of the LED's and sounder in different alarm modes. This design function facilitates a simple installation on the same BUS-Cable as the gas detectors, eliminating the need for additional cable. The LED-Sign is also available with 30 cm length one sided (standard) or double-sided.

LED-SIGN (ELECTRONICS)

SUPPLY VOLTAGE: 24 VDC | **POWER :** max. 2 W | **SUPPLY ANALOGUE (24V)/DIGITAL:** 2x 0,75 mm, 2×2×0,8 mm2, shielded | **PROTECTION CLASS:** IP 52 | **VOLUME:** ca. 92 dB | **LIFETEIME LEDS:** 50'000 h | **WEIGHT:** 400 gr | **CERTIFICATIONS:** CE

DIMENSIONS AND CONNECTIONS

625mm

500mm

LED-Sign
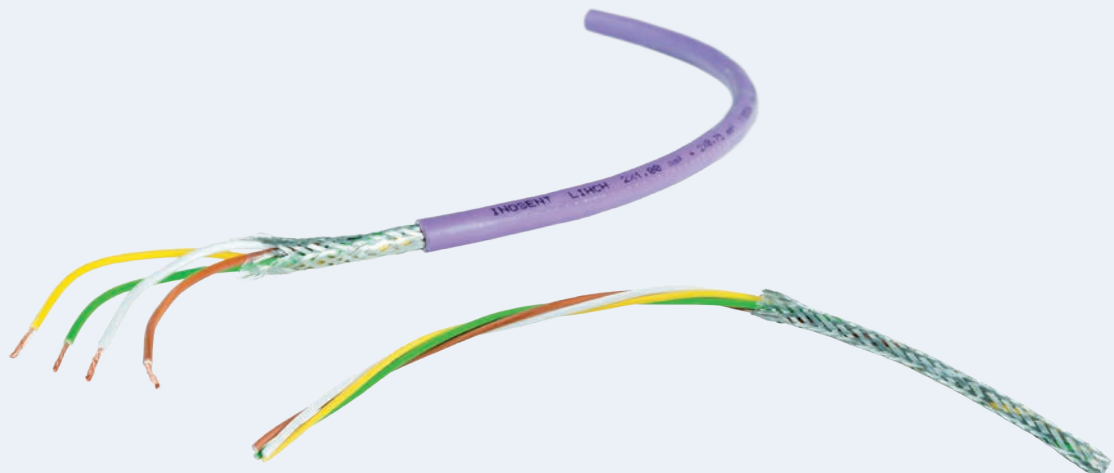Text / Pictograms

187mm

20-28V

24+
GND
A
B

ModbusRTU

INOSENT MODBUS-CABLE 2x1MM² / 2x0.75MM² IMK 21275

The INOSENT Modbus-cable IMK 21275 was designed for our BUS system. The colored cores allow easy and correct connection of the components.

The shield and the paired wires protect our data cable from external influences. Our cable meets the fire protection class CPR B2ca and is halogen-free

CABLE TYP:	IMK 21275
OUTSIDE DIAMETER:	7.80 mm
OUTHER SHEATH:	violet, halogen-free, shielded
CORES:	twisted in pairs halogen free
POWER SUPPLY CROSS-SECTION:	2 × 1 mm²
COLOURS POWER SUPPLY:	Brown = V- / White = V+
DATA CABLE CROSS-SECTION:	2 × 0.75 mm²
SUPPLY COLOURS:	Green = A / Yellow = B
FIRE PROTECTION CLASS:	CPR B2ca

INOSENT
GASWARNTECHNIK

CONTACT

INOSENT IS THERE FOR YOU

Regardless of the reason for your interest in the area of gas detection technology: Contact us and we will do our best to find the optimum solution for you.

We will be happy to go into detail with you and address your specific ideas and concerns – because you can always depend on INOSENT.

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E-Mail: info@inosent.ch