GAS DETECTOR
ST350EX-NDIR

PART.NO. **1227090**

DETECTION OF TOXIC GASES

GENERAL DESCRIPTION

- Detection of toxic gases
- ATEX / IECEx approved
- All-round industrial gas detector
- Touch screen experience, control without additional tools
- Self-diagnostics
- Reliable sensor technology

The **ST350EX-NDIR** is an all-round gas detector which is suitable for a large number of applications where Carbon Dioxide forms a risk. The heart of the detector is a replaceable gas sensor. The measuring principle consists of an Infrared sensor (NDIR) with a high durability. The sensor offers a long term stability and has a long life-span, which achieves an optimal cost of ownership.

The **ST350EX-NDIR** is available with or without a graphic display. The version with a graphic display, shows the measured value and various status notifications locally. The capacitive key control gives you an experience similar to a touchscreen and enables easy navigation through the user/calibration menu. The user menu is secured with a password; unauthorized users cannot access the gas detector.

The control of the user/calibration menu does not require additional tools (for example magnets). Simple, easy and user friendly!

The user menu provides different features, such as a zero and span calibration, adjusting alarm set points (local alarm indication through notifications on the display and colored LED), showing set points, diagnostic information and simulation of the output signal (4-20mA) for loop testing without gas.

HIGH AREAS / REMOTE APPLICATIONS:

A remote application allows the user to mount the sensor separately from the transmitter. Remote sensors are ideal for applications where the gases present ascend, i.e. gases lighter than air. High located detection areas are often difficult to reach for example during maintenance. When using a remote sensor, the sensor itself will be mounted high and the transmitter will be mounted within close reach. This makes maintenance quick and easy and therefore cost effective. Cable lengths up to 150 meters are supported between the transmitter and the remote sensor (depending on the type).

APPLICATIONS:

- Food industry
- Medical Industry
- Chemical industry
- Laboratories/Universities
- Power industry

WE OFFER MORE THAN A PRODUCT!

- Tailored advice
- Project advice
- Technical support
- Training and education
- pharmaceutical industry
- Onsite service / maintenance / calibration

The specifications described herein are subject to change without notice.

DATA SHEET ST350EX-NDIR no. 1227090_EN_2021_v1.05

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Standard version

LCD version

Remote / LCD version

ORDERING INFORMATION

GAS DETECTOR							
TYPE	**GASTYPE**	**RANGE**	**PART NO**				
			STANDARD	**REMOTE***	**LCD**	**ALU** of **SS****	
ST350EX-NDIR N_2O	Nitrous oxide	0-1000ppm N_2O	1227090	.../R	.../LCD	…/Al	…/SS

* Levering inclusief 10 meter tubing

** Standaard geleverd als aluminium behuizing

EXAMPLE

| Remote | No = 0 |
| | Yes = R |

| Version |

| No = 0 | LCD |
| Yes = LCD | |

| Aluminium = Al |
| Stainless Steel = SS |

| 1227000 | / | R | / | LCD | / | Al |
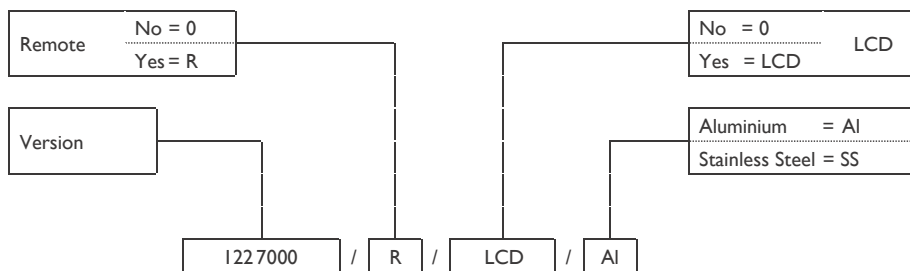
Article no. example: ST350EX-SCV (Toluene) standard version, with LCD, aluminium housing: **1227000/0/LCD/Al**

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ACCESSORIES

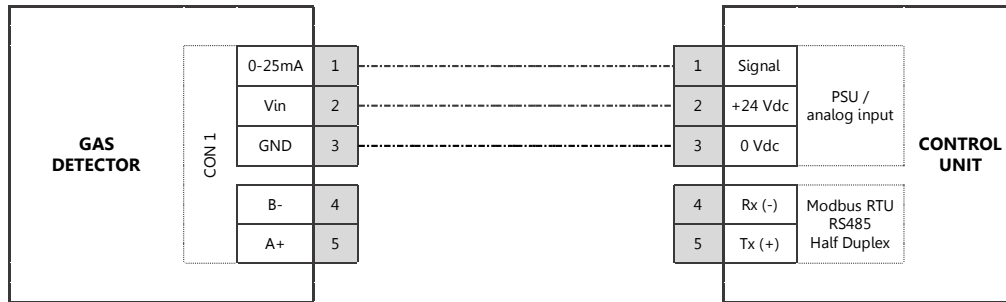| TYPE	IMAGE	PART NO.	DESCRIPTION
Signal cable		4002427	4 core shielded cable, 4x0,75 mm2 (flexible cores, 3+PE), per meter
Duct mounting set		4002723	Duct mounting set for mounting in ventilation ducts
Splash guard		4002716	Environment sensor protection, incl. splash water
Inline flow adapter		4002720	Inline flow adapter for sample applications, connection 2x6mm, SS
Protective hood		4002714	Protective hood SS, for optimal sensor protection in "wet" production areas, dim. 315x300x138 mm
Isolation set EMC/RFI		4002440	Isolation plate EMC/RFI, 160x160 mm
Protective bracket		4002713	SS bracket, extra protection for use in e.g. warehouses
Conical collector hood		4000657	Conical hood for ascending gases

SPARE PARTS / CONSUMABLES

TYPE	PART NO.	RANGE	DESCRIPTION
Type IRs N_2O	1212590	0-1000ppm	Nitrous oxide (N_2O) NDIR sensor 0-1000ppm

TEST GASES AND ACCESSORIES

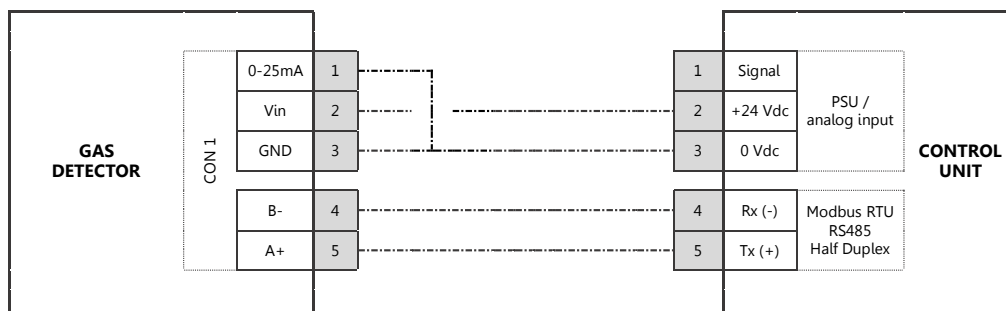| TYPE	PART NO.	DESCRIPTION
Calibration adapter	4002715	Stainless Steel calibration flow adapter
Gas hose	1225819	Flexible tubing, Ø 6mm, per meter
Gas humidity bottle	1227300	Humidity bottle, to humidify the test gas (only applicable for SCV/SCF sensors)
Flow regulator	9990600	Flow regulator Chrome/brass, fixed flow 0,5 l/min
Flow regulator	9990601	Flow regulator Stainless Steel, fixed flow 0,5 l/min

Consilium offers a wide range of test gases, if the required test gas is not listed, please contact us.
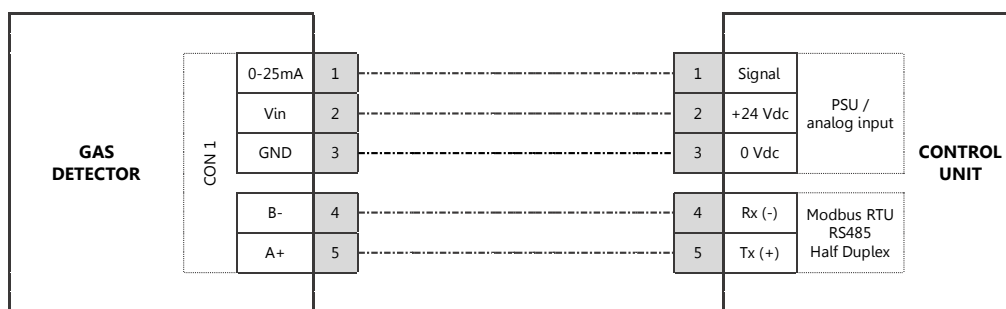
CONNECTION DIAGRAM GAS DETECTOR
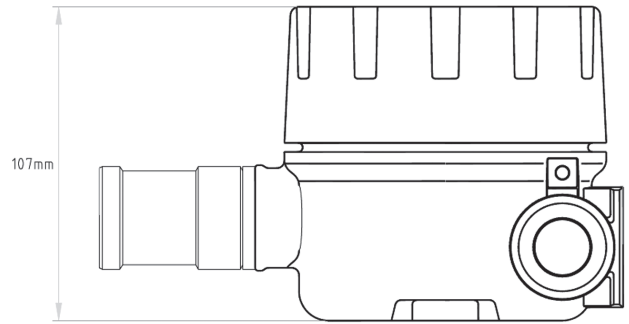
ST350EX used as 4-20mA transmitter (3 wires):

GAS DETECTOR	CON 1							
		0-25mA	1		1	Signal	PSU / analog input	CONTROL UNIT
		Vin	2		2	+24 Vdc		
		GND	3		3	0 Vdc		
		B-	4		4	Rx (-)	Modbus RTU RS485 Half Duplex	
		A+	5		5	Tx (+)		

ST350EX used as MODBUS slave device:

GAS DETECTOR	CON 1							
		0-25mA	1		1	Signal	PSU / analog input	CONTROL UNIT
		Vin	2		2	+24 Vdc		
		GND	3		3	0 Vdc		
		B-	4		4	Rx (-)	Modbus RTU RS485 Half Duplex	
		A+	5		5	Tx (+)		

ST350EX used as MODBUS slave device and 3 wire 4-20 mA transmitter:

GAS DETECTOR	CON 1							
		0-25mA	1		1	Signal	PSU / analog input	CONTROL UNIT
		Vin	2		2	+24 Vdc		
		GND	3		3	0 Vdc		
		B-	4		4	Rx (-)	Modbus RTU RS485 Half Duplex	
		A+	5		5	Tx (+)		

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DIMENSIONS

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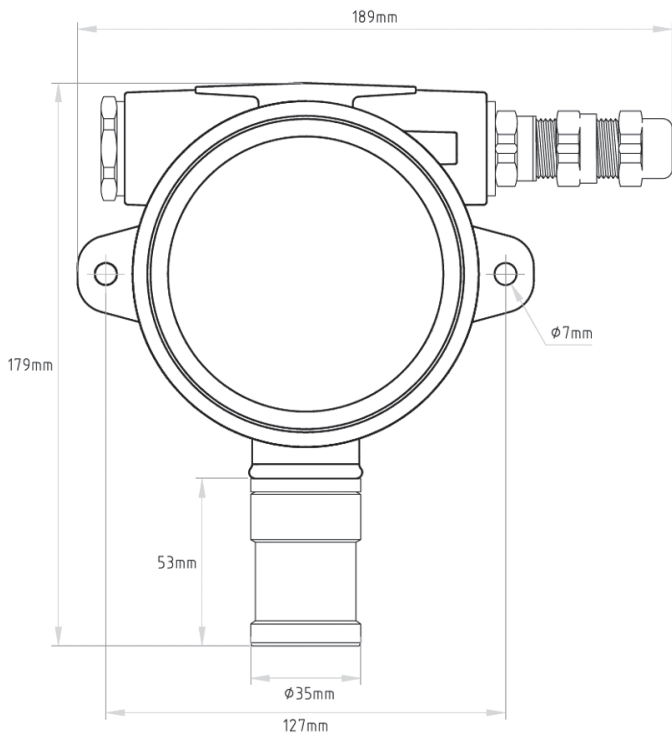
SPECIFICATIONS

PRODUCT	ST350EX-NDIR
Gas type	Toxic gases
Sensor type	Infrared (NDIR)
Display (optional)	Digital graphic display with backlight
Status LED display	Green: OK, Red: Alarm, Yellow: SF (System Failure), Blue: User menu active
Power supply	17.5-24 VDC (max. 120 mA)
Outputs	Analogue: 4-20 mA (2 mA system failure, >20 mA overrange) Digital: RS485 Modbus RTU (half-duplex)
Signal cable	3-wire shielded, 0.75 … 2.5 mm2 (excluding earth connection and Modbus)
Cable gland	Standard Brass, optional SS (thread M20x1.5)
Load impedance	max. 400 Ω at 24 VDC
Operating temperature	Standard -10 tot +50 °C
Relative humidity	15-95 % (non-condensing)
Pressure range	700 to 1300 hPa
Enclosure	Aluminum with coating, optional SS
Dimensions	179 x 189 x 107 mm (HxWxD)
Weight	**Aluminum:** 1,3 kg **Stainless Steel:** 2,55 kg, **Aluminum LCD:** 1,75 kg **Stainless Steel LCD:** 3 kg
Ingress Protection	IP 66 (Sensor IP 6x)
Enclosure gas sensor	SS 316
CE marking	ATEX (Directive 2014/34/EU) Electromagnetic Compatibility (Directive 2014/30/EU)

Approvals	ATEX II 2G Ex db IIC T6 Gb
	           II 2D Ex tb IIIC T85°C Db
	IECEx Ex db IIC T6 Gb
	           Ex tb IIIC T85°C Db

Manufacturer	BUVECO Gasdetection BV, a Consilium Group Company