GAS DETECTOR
ST350EX-V
ST350EX-F

PART.NO. **1227000-1227058**

DETECTION OF C_xH_y AND REFRIGERANTS

GENERAL DESCRIPTION

- Detection of Aromatic Hydro-Carbons (ppm) and synthetic refrigerant gases (H)CFK's and HFK's
- All-round industrial gas detector
- ATEX / IECEx approved / Type Approval
- Touch screen experience, control without additional tools
- Self-diagnostics
- Reliable sensor technology

The **ST350EX** is an all-round gas detector and useful for many applications. The heart of the detector is a replaceable gas sensor. This sensor is available in various versions, such as a SCV and a SCF sensor. The SCV sensor is suitable for the detection of Aromatic Hydrocarbons at ppm level (for example Toluene or Xylene) and also for Carbon disulfide (CS_2).
The SCF sensor is suitable for the detection of synthetic refrigerants (H)CFK's and HFK's. These are well known Freon's such as R134a, R407C and the newer type R1234yf. Both the SCV and the SCF sensors are stable over their entire long life-time. A solid cost of ownership!
The **ST350EX** 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:

- Refrigeration
- Soil remediation
- Painting industry, printing ink industry
- Spraying booths and dry cabins
- Shipping
- Storage of dangerous goods
- Chemical industry

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

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ORDERING INFORMATION

GAS DETECTOR						
TYPE	**GASTYPE**	**RANGE**	**PART NO**			
			STANDARD	**REMOTE***	**LCD**	**ALU** or **SS****
ST350EX-V (SCV)	Toluene C_7H_8	0-100 ppm	1227000	.../R	.../LCD	.../Al	.../SS
	Carbon Disulfide CS_2	0-100 ppm	1227011				
		0-300 ppm	1227001				
	Ethanol C_2H_6O	0-250 ppm	1227002				
	Methanol CH_3OH	0-250 ppm	1227003				
	Hexane C_6H_{14}	0-150 ppm	1227004				
	Vinyl Chloride C_2H_3Cl	0-200 ppm	1227005				
	Methyl Chloride CH_3Cl	0-100 ppm	1227006				
	Xylene C_8H_{10}	0-100 ppm	1227008				
	Propene C_3H_6	0-1000 ppm	1227009				
	Carbon Monoxide CO	0-500 ppm	1227010				
ST350EX-F (SCF)	R134a	0-1000 ppm	1227050	.../R	.../LCD	.../Al	.../SS
	R22	0-1000 ppm	1227051				
	R404A	0-5000 ppm	1227052				
	R410A	0-5000 ppm	1227053				
	R1234yf	0-1000 ppm	1227054				
	R507	0-5000 ppm	1227055				
	R407C	0-1000 ppm	1227056				
	R449A	0-1000 ppm	1227057				
	R32	0-1000 ppm	1227058				

* Incl. 10 meter tubing

** Standard delivered in Aluminium (Al) housing

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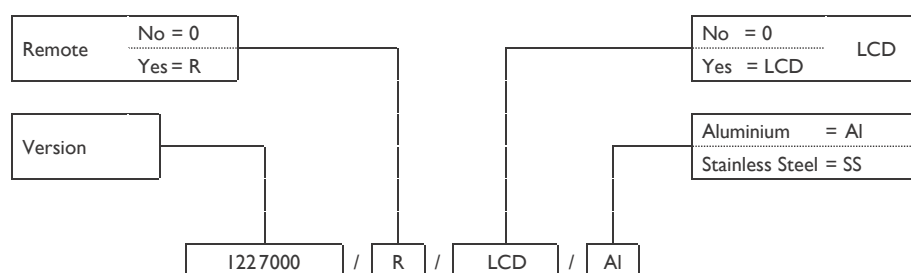
| | | Article no. example: | ST350EX-SCV (Toluene) standard version, with LCD, aluminium housing: **1227000/0/LCD/Al** |

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Standard version

LCD version

Remote / LCD version

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

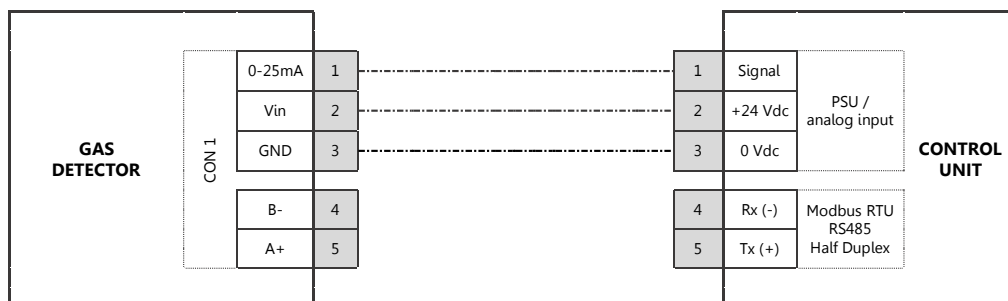| SPARE PARTS / CONSUMABLES			
SPARE GAS SENSOR	**PART NO.**	**RANGE**	**DESCRIPTION**
Type SCV	1212587	Calibration dependent	Standard applications, (Aromatic) Hydrocarbons, ppm level (SCV sensor)
Type SCF	1212582	Calibration dependent	Freon applications, detection of synthetic refrigerants (SCF sensor)
Type SCF A2L30	1212581	Calibration dependent	Freon applications, detection of synthetic refrigerants (SCF sensor)

TEST GASES AND ACCESSORIES		
TYPE	**PART NO.**	**DESCRIPTION**
Toluene	9990521	Toluene, 100 ppm in air, 110 gas liters
Propene	9990541	Propene, 1000 ppm in air, 110 gas liters
CO	9990536	Carbon monoxide, 150 ppm in air, 110 gas liters
Freon R134a	9990520	Freon, 1000 ppm R134a in air, 110 gas liters
Freon R125	9990519	Freon, 500 ppm R125 in air, 110 gas liters
Air	9990537	Synthetic air, 20,9% /N_2, 110 gas liters
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.
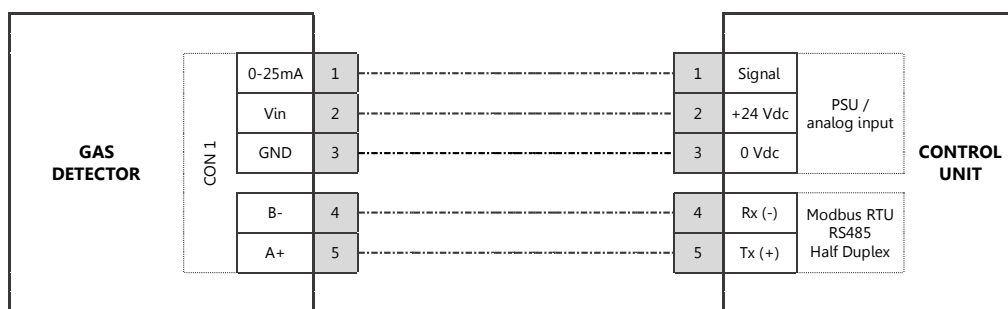
The specifications described herein are subject to change without notice.　　　　DATA SHEET ST350EX-V / ST350EX-F no. 1227000-1227058_EN_2021_v2.08

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CONNECTION DIAGRAM GAS DETECTOR

ST350EX used as 4-20mA transmitter (3 wires):

	CON 1						
GAS DETECTOR	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:

	CON 1						
GAS DETECTOR	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 (+)			
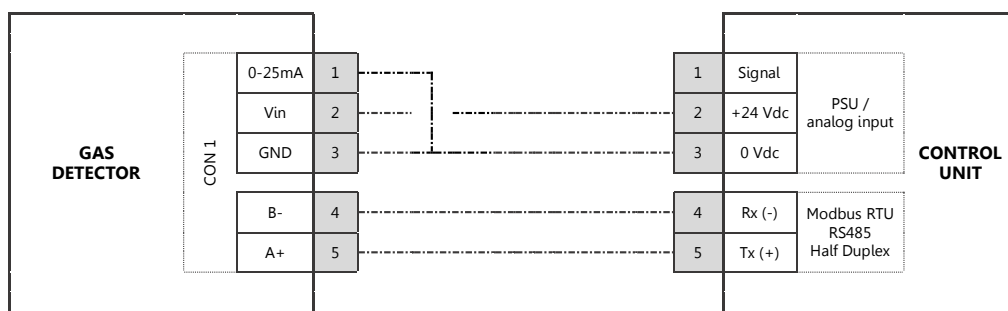
ST350EX used as MODBUS slave device and 3 wire 4-20 mA transmitter:

	CON 1						
GAS DETECTOR	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

189mm

179mm

⌀7mm

53mm

⌀35mm

127mm

107mm

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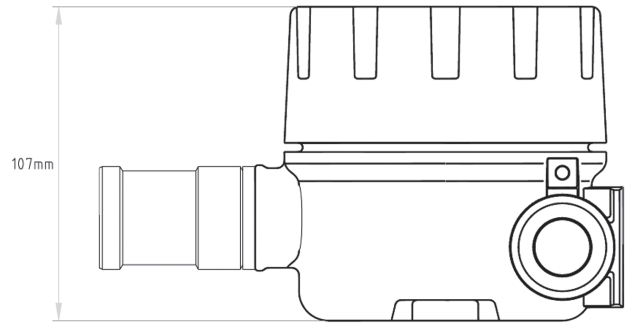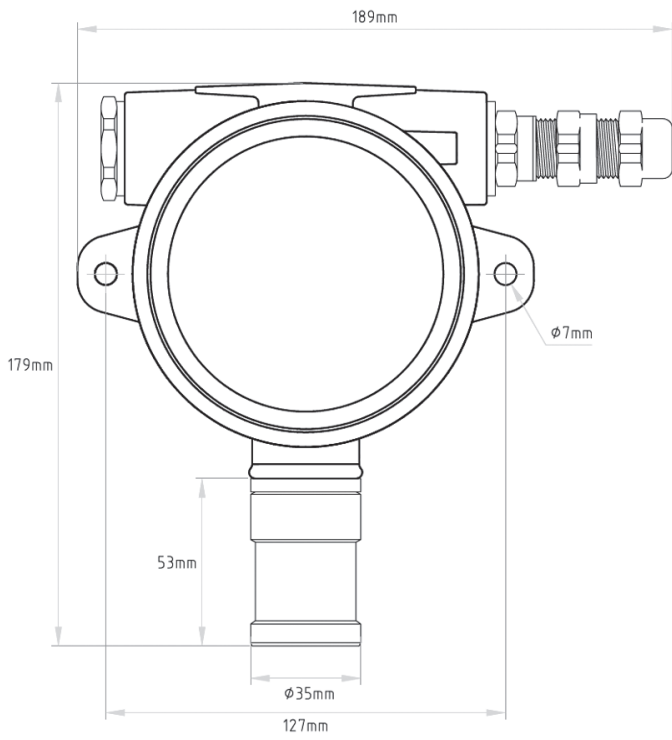
SPECIFICATIONS

PRODUCT	ST350EX-V & ST350EX-F
Gas type	Toxic gases, (aromatic) Hydrocarbons, synthetic refrigerants (Freon's) (H)CFK's and HFK's
Sensor type	Semiconductor sensor (MOS), type SCV and SCF
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

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