



GAS DETECTOR

ST150 / ST350 PID

PART. NO. 1227500-1227530

DETECTION OF VOLATILE ORGANIC COMPOUNDS

SYSTEM GS5000, SW2020, BUCONTROL, BUTOUCH

GENERAL DESCRIPTION

- Photo Ionisation Detection (PID)
- Detection of +600 volatile organic compounds (VOC's)
- 10,6 eV lamp
- Patented Fence Electrode Technology
- Touch screen experience, i.e. control without tools
- Reliable sensor technology

The **ST150 / ST350EX PID** is a fixed PID gas detector suitable for the detection of volatile organic components (VOC's). The **ST150 / ST350 EX PID** utilise the Photo Ionization measuring principle and is equipped with a 10.6eV PID lamp with a patented fence electrode. Because of this "fence", the sensor has a better protection against atmospheric humidity and pollution. The PID sensor has a very fast response and a high sensitivity due to this gasses with an ionisation potential <10.6eV are quickly detected.

The PID gas detector is available in three measuring ranges, 0-10 ppm, 0-100 ppm and 0-1000 ppm.

The ST150 is a non-Ex version and the ST350EX PID is ATEX and IECEx certified for use in Ex zones 1/2 and 21/22.

The **ST150 PID / ST350EX PID** is available with or without a graphic display. A version with a graphical display will locally display the measured values and various status messages. With a capacitive key operation, the user can easily navigate through the user / calibration menu. Access to the menu is protected by a password, preventing unauthorized users from accessing the device. No additional tools are required for operating the user / calibration menu (eg magnets). Simple, easy and user-friendly!

The user menu offers various features such as zero point and span calibration, setup of alarm set points (local alarm indication: alarm message on the display and coloured LED), display of set points, diagnostic data and simulation of the output signal (4-20mA) for loop testing.

APPLICATIONS:

- + Health Safety & Environment (HSE)
- + Soil remediation and research
- + Arson investigation
- + Air Quality
- + Storage of dangerous goods
- + Chemical Industry

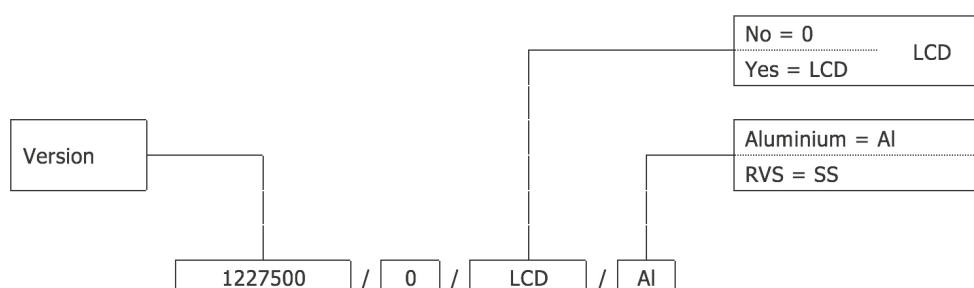
WE OFFER MORE THAN A PRODUCT!

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

ORDERING INFORMATION

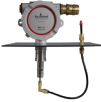
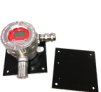
GAS DETECTOR						
TYPE	ATEX/IECEX	GAS	RANGE	PART NO.		
				STANDARD	LCD	AL/SS
ST150 PID LR (LOW RANGE) Non-Ex	No	Isobutylene	0-10 ppm	1227500/0	.../LCD	.../SS
ST150 PID HR (HIGH RANGE) Non-Ex	No	Isobutylene	0-100 ppm	1227510/0	.../LCD	.../SS
		Isobutylene	0-1000 ppm	1227520/0	.../LCD	.../SS
ST350EX PID LR (LOW RANGE)	Yes	Isobutylene	0-10 ppm	1227530/0	.../LCD	.../SS
ST350EX PID HR (HIGH RANGE)	Yes	Isobutylene	0-100 ppm	1227520/0	.../LCD	.../SS
		Isobutylene	0-1000 ppm	1227521/0	.../LCD	.../SS

EXAMPLE



Example part no.: ST150-PID (Isobutylene) standard version, with LCD, aluminium: **1227500/0/LCD/Al**

ACCESSORIES

TYPE	IMAGE	PART NO.	DESCRIPTION
Signal cable		5150223-00A	4 core shielded cable, 4x0,75 mm ² (flexible cores, 3+PE), per meter
Duct mounting set		5150229-00A	Duct mounting set for mounting in ventilation ducts
Splash guard		4002716	Environmental sensor protection, incl. splash water
Protective hood		5150226-00A	Protective hood SS, for optimal protection in "wet" production areas, dim. 315x300x138 mm
Isolation set EMC/RFI		5150231-00A	Isolation plate EMC/RFI, 160x160 mm
Protective bracket		5150225-00A	SS bracket, extra protection for use in e.g. warehouses

SPARE PARTS / CONSUMABLES

TYPE	PART NO.	RANGE	DESCRIPTION
ST150 PID sensor "High Range"	1227900	0-100 / 0-1000 ppm	Range for standard Isobutylene calibration
ST150 PID sensor "Low Range"	1227901	0-10 ppm	Range for standard Isobutylene calibration
ST350 PID sensor "High Range" (ATEX/IECEx)	1227910	0-100 / 0-1000 ppm	Range for standard Isobutylene calibration
ST350 PID sensor "Low Range" (ATEX/IECEx)	1227911	0-10 ppm	Range for standard Isobutylene calibration

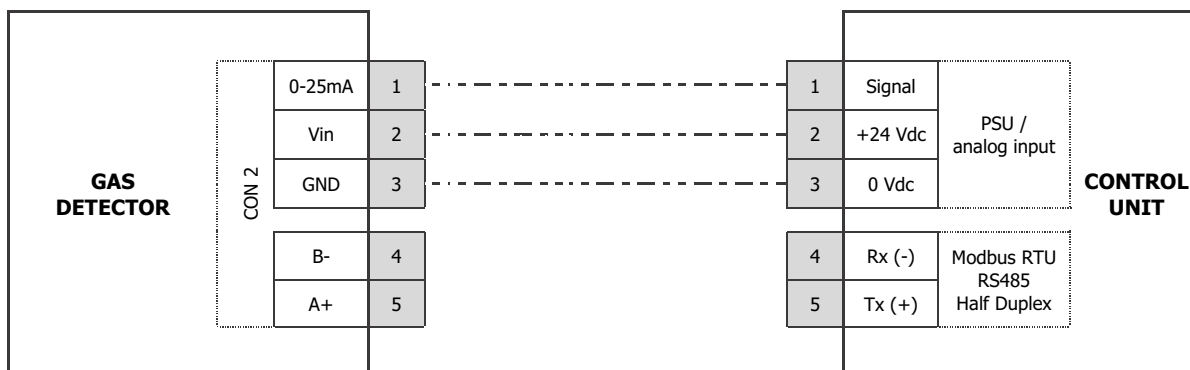
TEST GASES AND ACCESSORIES

TYPE	PART NO.	DESCRIPTION
Isobutylene	9990525	Isobutylene, 10 ppm in air, 110 gas litre
Isobutylene	9990527	Isobutylene, 100 ppm in air, 110 gas litre
20,9% O ₂ / N ₂	9990537	Synthetic air, 20,9% O ₂ / 79% N ₂ , 110 gas litre
Flow adapter	4002715	Stainless steel calibration adapter
Gas hose	1225819	Flexible tubing Ø 6mm, per metre
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

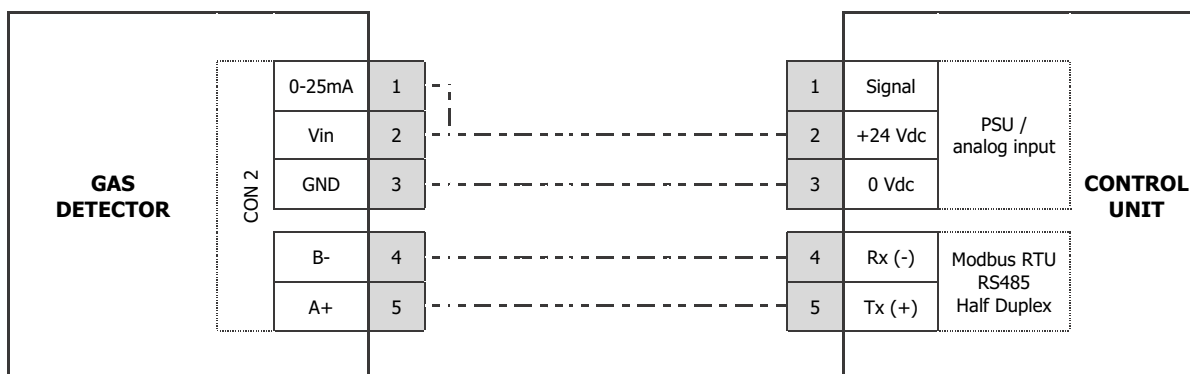
Consilium offers a wide range of test gases, if the required test gas is not listed, please contact us.

CONNECTION DIAGRAM GAS DETECTOR

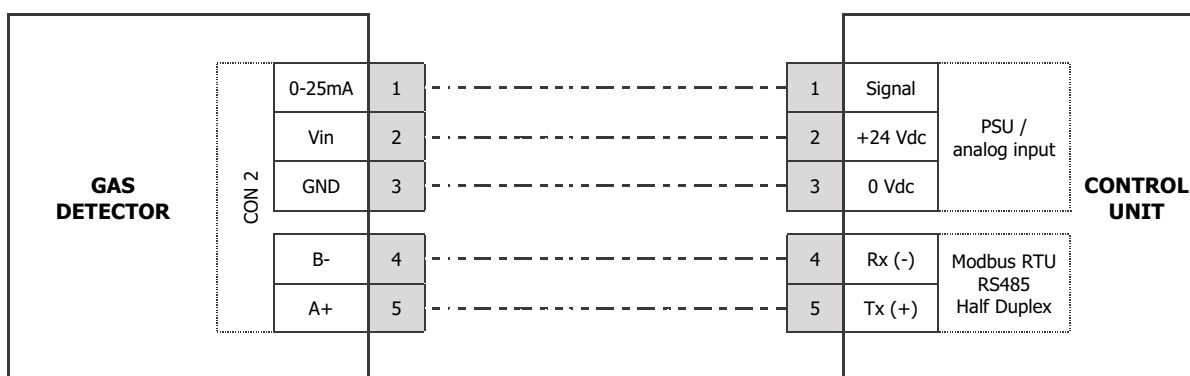
ST150/ST350EX used as 4-20mA transmitter (3 wires):



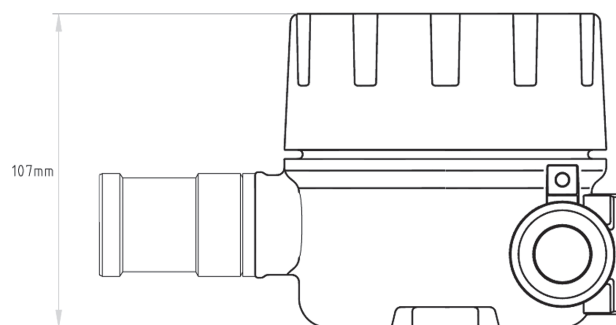
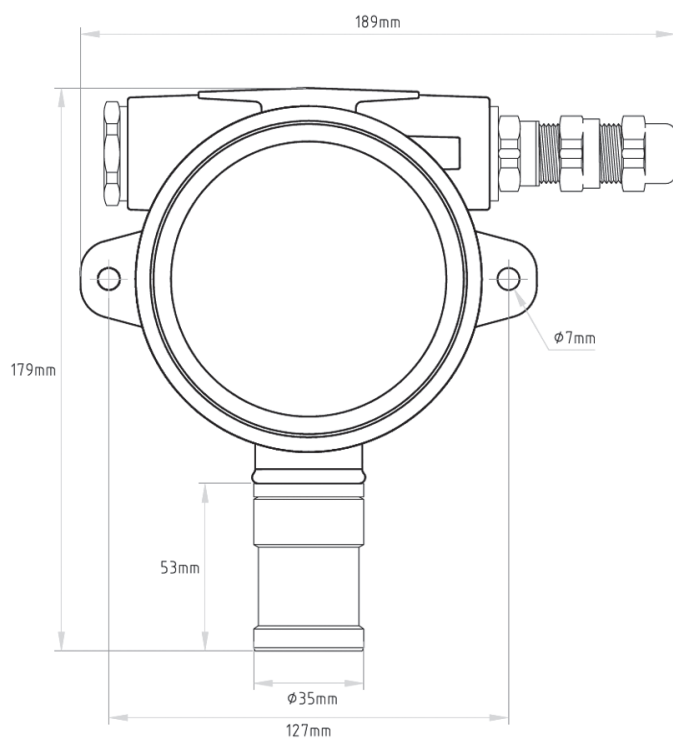
ST150/ST350EX used as MODBUS slave device:



ST150/ST350EX used as MODBUS slave device and 3 wire 4-20mA transmitter:



DIMENSIONS



SPECIFICATIONS

PRODUCT	ST150 PID (NON-EX) ST350EX PID (ATEX/IECEX)
Gas type	Volatile organic compounds (VOC's)
Calibration	Standard Isobutylene (other calibrations on request)
Sensor type	PID 10,6eV lamp (high purity Krypton) (2 types: low range and high range)
Measuring range	Low range : 0-10 High range : 0-100 ppm and 0-1000 ppm
Display (optional)	Graphic with back light
Status LED display	Green: OK, Red: Alarm, Yellow: SF (System fault), Blue: Use menu active
Power supply	17,5-24VDC (max. 120mA)
Outputs	Analogue 4-20mA, (2mA system fault, >20 mA over range) Digital: RS485 Modbus RTU (half duplex)
Signal cable	3-wire shielded, 0.75 ... 2.5 mm ² (excluding earth connection and Modbus)
Cable gland	Standard Brass, optional SS (thread M20x1,5)
Load impedance	max. 400Ω at 24VDC
Operating temperature	Standard -20 to +55 °C
Relative humidity	0-99 % (non-condensing)
Pressure range	900 to 1100 hPa
Enclosure	Aluminium with coating, optional SS
Dimensions	179 x 189 x 107 mm (HxWxD)
Weight	Aluminium: 1,3 kg Stainless Steel: 2,55 kg, Aluminium 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 (ST350EX)	ATEX II 2G Ex d IICT6 Gb II 2D Ex tb IIIC T85°C Db IECEX Ex d IICT6 Gb Ex tb IIIC T85°C Db
Manufacturer	BUVECO Gasdetection BV, a Consilium Group Company

