

# GAS DETECTOR ST400EC

PART.NO. 1217502-1217521



DETECTION OF TOXIC GASES AND OXYGEN

SYSTEM GS5000, GS3000, SW2020, BUCONTROL / BUTOUCH

## GENERAL DESCRIPTION

- Detection of toxic gases and Oxygen
- ATEX certified, suitable for zone 0
- One man calibration
- 4-20 mA output
- Reliable sensor technology

The **ST400EC**, is a gas detector for the detection of Oxygen, Toxic gases or Hydrogen.

De ST400EC is assembled with a chromed plated ABS housing with a transmitter board, replaceable electrochemical sensor, Stainless steel sensor holder and EMC cable gland. The transmitter is based on the "one man calibration" principle, this means that calibration take place at the detector head directly.

**The sensor** is a replaceable electrochemical sensor. Operation of the sensor depends upon the changes of the electrical parameters of electrodes, in contact with an electrolyte, due to reaction of the gas on the surface of the electrodes. The chemical reaction in the sensor produces a current output signal. The obtained signal, proportional with the gas concentration, will be converted in a linear output signal, 4-20 mA, 2 wire.

**Explosion proof**, this sensor / transmitter is intrinsically safe in combination with the specified external isolator, according ATEX Ex ia IIC T5 G and can be used in an Ex zone 0.

## APPLICATIONS:

- + Refrigeration
- + Soil remediation
- + Water Industry
- + Food Industry
- + Laboratory / Universities
- + Storage of dangerous goods
- + Chemical industry

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







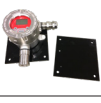


## ORDERING INFORMATION

GAS DETECTOR				
TYPE	RANGE	PART NO.	OPERATING TEMPERATURE	RELATIVE HUMIDITY (N.C.)
ST400-AsH <sub>3</sub>	0-500 ppb	1217518	-20 tot +40 °C	10-95%
ST400-Br <sub>2</sub> *	0-1 ppm	1217529	-20 tot +40 °C	15-90%
ST400-Cl <sub>2</sub>	0-5 ppm	1217507	-20 tot +40 °C	15-90%
ST400-Cl <sub>2</sub>	0-50 ppm	1217530	-20 tot +40 °C	15-90%
ST400EC-CO *	0-250 ppm	1217502	-40 tot +50 °C	15-90%
ST400-COCl <sub>2</sub>	0-1 ppm	1217509	-20 tot +40 °C	15-90%
ST400-ClO <sub>2</sub>	0-1 ppm	1217525	-20 tot +40 °C	15-90%
ST400-ETOX	0-20 ppm	1217523	-20 tot +50 °C	15-90%
ST400-F <sub>2</sub>	0-1 ppm	1217516	-10 tot +40 °C	15-90%
ST400-H <sub>2</sub> *	0-1000 ppm	1217513	-20 tot +40 °C	15-90%
ST400-H <sub>2</sub> (LEL) *	0-100 %LEL	1217521	-20 tot +40 °C	15-95%
ST400-H <sub>2</sub> S (G) *	0-30 ppm	1217506	-20 tot +40 °C	10-90%
ST400-H <sub>2</sub> S (L) *	0-30 ppm	1217522	-20 tot +40 °C	15-90%
ST400-HCl	0-30 ppm	1217517	-20 tot +40 °C	15-95%
ST400-HF	0-10 ppm	1217512	-20 tot +40 °C	15-90%
ST400-HCN *	0-30 ppm	1217508	-40 tot +40 °C	15-90%
ST400-N <sub>2</sub> H <sub>4</sub> *	0-1 ppm	1217515	-10 tot +40 °C	20-95%
ST400-NH <sub>3</sub>	0-100 ppm	1217503	-20 tot +40 °C	15-95%
ST400-NH <sub>3</sub>	0-1000 ppm	1217526	-20 tot +40 °C	15-90%
ST400-NO	0-100 ppm	1217514	-15 tot +40 °C	20-90%
ST400-NO <sub>2</sub> *	0-20 ppm	1217504	-20 tot +50 °C	15-90%
ST400-O <sub>2</sub> *	0-25 Vol.%	1217511	-30 tot +55 °C	5-95%
ST400-O <sub>3</sub> *	0-1 ppm	1217510	-20 tot +40 °C	15-90%
ST400-SiH <sub>4</sub>	0-50 ppm	1217519	-20 tot +40 °C	15-95%
ST400-SO <sub>2</sub> *	0-20 ppm	1217505	-20 tot +50 °C	15-90%
ST400-TBM *	0-50 mg/m <sup>3</sup> (0-14 ppm)	1217524	-10 tot +40 °C	10-95%

\*ATEX certified

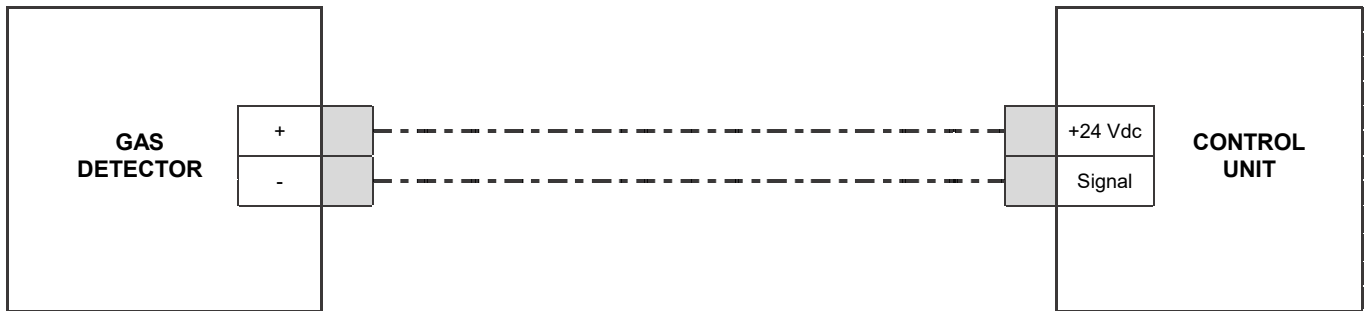
SPARE PARTS / CONSUMABLES			
SPARE GAS SENSOR	PART NO.	RANGE	DESCRIPTION
Type AsH <sub>3</sub>	I217618	0-500 ppb	Arsine sensor
Type Br <sub>2</sub>	I217635	0-1 ppm	Bromine sensor
Type Cl <sub>2</sub>	I217635	0-5 ppm	Chlorine sensor
Type Cl <sub>2</sub>	I217635	0-50 ppm	Chlorine sensor
Type CO	I217602	0-250 ppm	Carbon monoxide sensor
Type COCl <sub>2</sub>	I217609	0-1 ppm	Phosgene sensor
Type ClO <sub>2</sub>	I217626	0-1 ppm	Chlorine Dioxide sensor
Type ETOX	I217623	0-20 ppm	Ethylene oxide sensor
Type F <sub>2</sub>	I217616	0-1 ppm	Fluor sensor
Type H <sub>2</sub> ppm	I217613	0-1000 ppm	Hydrogen (ppm) sensor
Type H <sub>2</sub> LEL	I217621	0-100 %LEL	Hydrogen (LEL) sensor
Type H <sub>2</sub> S (G)	I217606	0-30 ppm	Hydrogen sulfide (G) sensor
Type H <sub>2</sub> S (L)	I217622	0-30 ppm	Hydrogen sulfide (L) sensor
Type HCl	I217617	0-30 ppm	Hydrogen chloride sensor
Type HF	I217612	0-10 ppm	Type Hydrogen fluoride sensor
Type HCN	I217608	0-30 ppm	Hydrogen Cyanide sensor
Type N <sub>2</sub> H <sub>4</sub>	I217615	0-1 ppm	Hydrazine sensor
Type NH <sub>3</sub>	I217603	0-100 ppm	Ammonia sensor
Type NH <sub>3</sub>	I217628	0-1000 ppm	Ammonia sensor
Type NO	I217614	0-100 ppm	Nitrogen Oxide sensor
Type NO <sub>2</sub>	I217604	0-20 ppm	Nitrogen dioxide sensor
Oxygen O <sub>2</sub>	I217627	0-25 Vol.%	Oxygen sensor
Type Ozone O <sub>3</sub>	I217624	0-1 ppm	Ozone sensor
Type SiH <sub>4</sub>	I217619	0-50 ppm	Silane sensor
Type SO <sub>2</sub>	I217605	0-20 ppm	Sulphur dioxide sensor
Type TBM	I217625	0-50 mg/m <sup>3</sup> (0-14 ppm)	TBM sensor

## ACCESSORIES

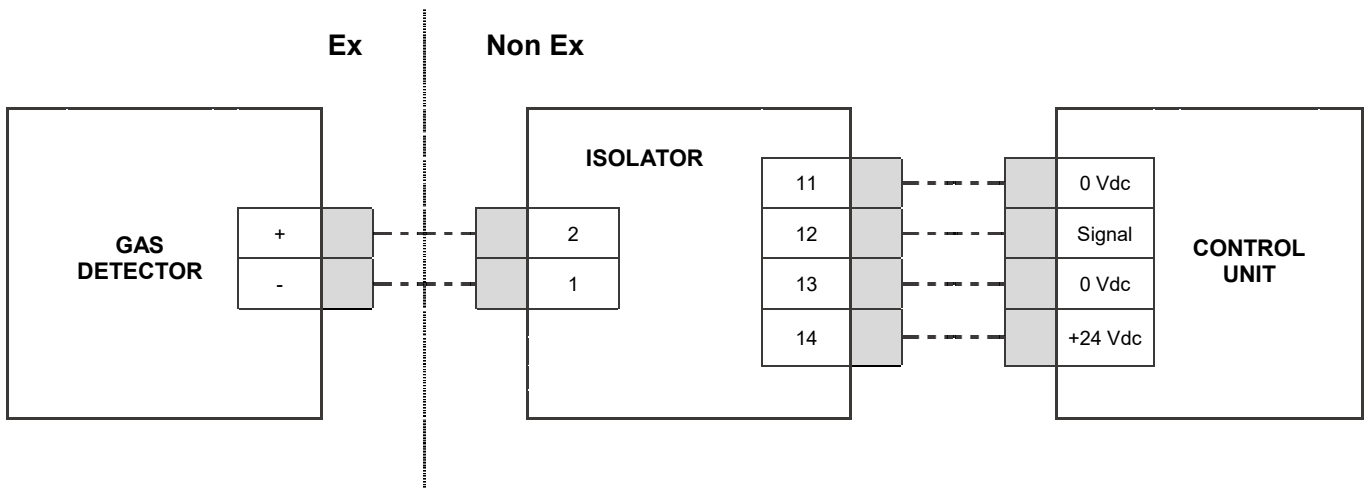
TYPE	IMAGE	PART NO.	DESCRIPTION
Isolator barrier for EX applications		1217576	Isolator barrier for use in combination with the explosion-proof gas sensor / transmitter ST400 with an EEx application
Signal cable		4002426	2 core shielded cable, 2x0,75 mm <sup>2</sup> (flexible cores, 3+PE), per meter
Duct mounting set		4002723	Duct mounting set for mounting in ventilation ducts
Splash guard		4002716	Environmental sensor protection, incl. splash water
Inline flow adapter		4002720	Inline flow adapter for sample applications, connection 2x6mm, SS
Protective hood		4002714A	Protective hood SS, for optimal 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		4000657A	Conical hood for ascending gases

CONNECTION DIAGRAM GAS DETECTOR

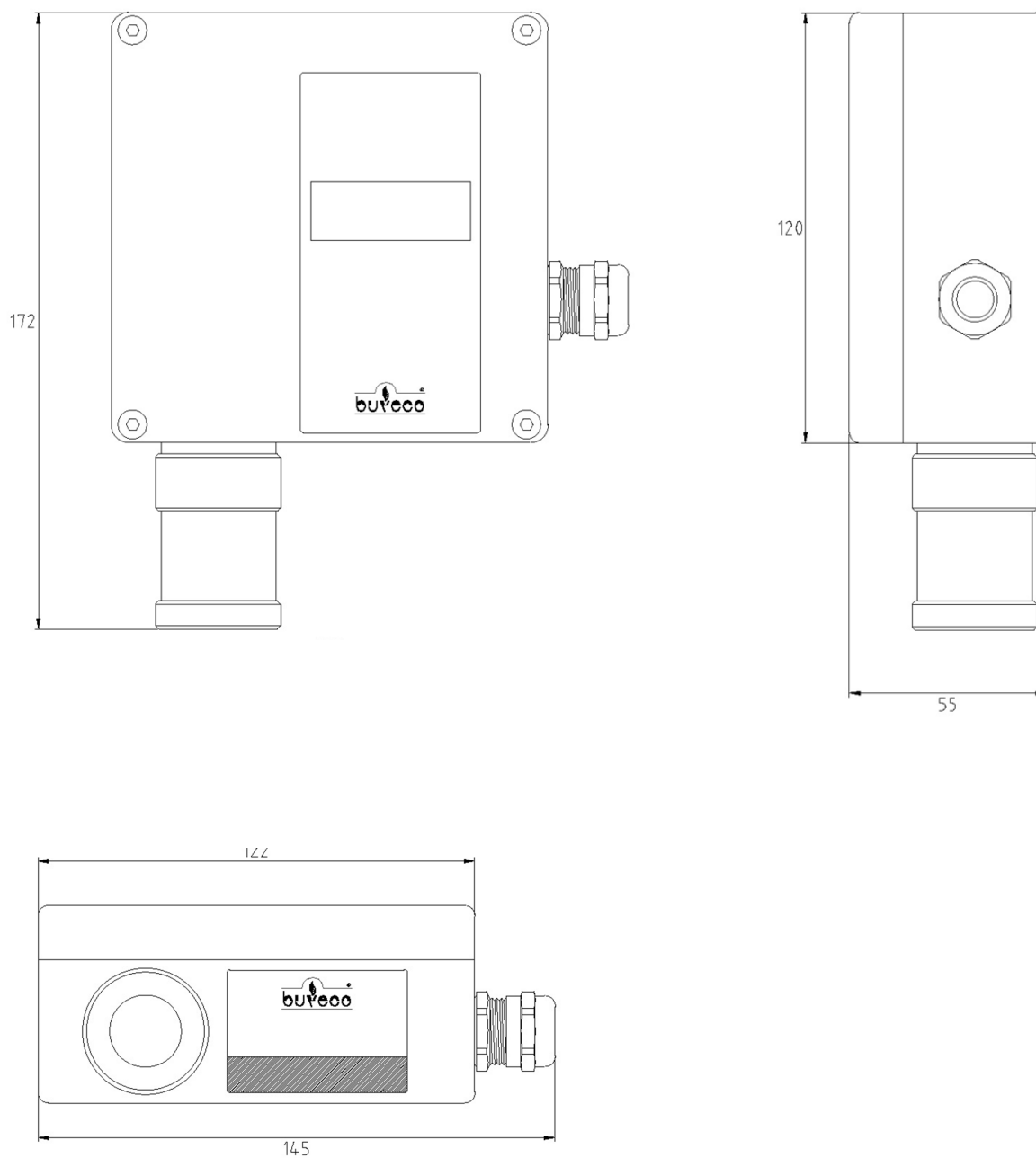
**ST400 - non-Ex zone**



**ST400 with isolator - Ex zone**



## DIMENSIONS



## SPECIFICATIONS

PRODUCT	ST400EC
Gas type	See table "Order information"
Sensor type	Electrochemical sensor (2 or 3 electrodes)
Range	See table "Order information"
Power supply	12-30 VDC (max. 0,75 Watt)
Outpt	Analog: 4-20mA
Signal cable	2-wire shielded, 0,75 ... 2.5 mm <sup>2</sup> (excluding earth connection)
Cable gland	Brass-nickel plated, EMC type
Operating temperature	See table "Order information"
Relative humidity	See table "Order information"
Pressure range	Toxic: Atmospheric $\pm$ 10%, Oxygen: 80 to 120 kPa
Enclosure	Metallized ABS
Dimensions	145 x 175 x 55 mm (LxBxD)
Weight	0,5 kg
Ingress Protection	IP 65 (excl. sensor)
Enclosure gas sensor	SS 316
CE marking	ATEX (Directive 2014/34/EU) Electromagnetic Compatibility (Directive 2014/30/EU)
Approvals	II 1 G Ex ia IICT5 Ga Tamb -40 °C tot +60 °C
Manufacturer	BUVECO Gasdetection BV, a Consilium Group Company

