ST450 EC NO_2 Gas Detector (0-20 ppm, Aluminium)

Product reference	
Part No.	5101161-00A
Manufacturer	Buveco Gasdetection BV, Zuidpool 9, 2801 RW Gouda, The Netherlands
Model	ST450 EC-NO_2



Product overview

Ordering SKU 5101161-00A, model ST450 EC-NO_2. The detector uses an electrochemical sensor (2 or 3 electrodes) and detects NO_2 over 0-20 ppm in a Aluminium enclosure. The source-assigned operating temperature is -20 °C to +40 °C and relative humidity is 15-95% RH (n.c.). Current certification validity is unknown. Accessories and replacement sensors are source-listed non-main items and are not expanded into new gas-detector products.

Technical specifications

Manufacturer approvals / certifications	ATEX Directive 2014/34/EU; current validity unknown.	Mounting orientation	Mount the detector in a vertical position, with the sensor pointing downwards.
Manufacturer approvals / certifications	Electromagnetic Compatibility Directive 2014/30/EU; current validity unknown.	Sensor-exchange clearance	Leave at least 11 cm free space below the sensor head for splashguard removal and bump-test hose connection.
Manufacturer approvals / certifications	IECEx; current validity unknown.	Cable-gland wording	Aluminium housing: Brass / SS housing SS (thread M20x1.5)
Ordering SKU	5101161-00A	Manufacturer (as printed)	Buveco Gasdetection BV, Zuidpool 9, 2801 RW Gouda, The Netherlands
Model	ST450 EC-NO_2	Publisher/contact (as printed)	Consilium, Salsmästaregatan 21, SE-422 46 Gothenburg, spares.se@consiliumsafety.com
Detected gas	NO_2	IP rating superscript note	IP66 plus superscript footnote 1; sensor IP6X; footnote wording retained separately.
Measuring range	0-20 ppm	Maximum current certification note	Maximum 120 mA according to certification; current validity unknown; historical certification note retained separately.
Enclosure material	Aluminium	Pressure range conditions (family)	Toxic: Atmospheric ± 10%; Oxygen: 80 to 120 kPa
Operating temperature	-20 °C to +40 °C	Cable gland thread	M20 x 1.5
Relative humidity	15-95% RH (n.c.)	Cable gland material (aluminium housing)	Unknown — source wording does not resolve housing/material pairing: Aluminium housing: Brass / SS housing SS (thread M20x1.5).
Sensor type	Electrochemical sensor (2 or 3 electrodes)	Cable gland material (SS housing)	Unknown — source wording does not resolve housing/material pairing: Aluminium housing: Brass / SS housing SS (thread M20x1.5).
Display	Digital graphic display with backlight	Replaceable sensor	Replaceable electrochemical gas sensor for oxygen and toxic gases.
Status LED	Green: OK; Red: Alarm; Yellow: System failure	Display, status, and backlight	Standard graphic display shows the measured value and local status notifications; backlight supports use in dark areas.
Power supply	18-30 V DC	Capacitive-key navigation	Capacitive-key control enables navigation through the user/calibration menu.
Power/current indication	< 2.4 mA = system error; 4-20 mA = normal operation; > 22 mA = overload	Password-secured menu	Password-secured user menu prevents unauthorized access; user/calibration control requires no additional tools, including magnets.
Outputs	4-20 mA, RS485 Modbus RTU (half-duplex); 2 mA system failure, >20 mA over range	Zero calibration	The user menu provides different features, such as a zero and span calibration.
Signal cable	2-wire shielded, 0.75 - 2.5 mm²	Span calibration	The user menu provides different features, such as a zero and span calibration.
Load impedance	Max. 300 Ω at 24 V DC	Alarm setpoints	Adjusting alarm set points.

Ingress protection	Enclosure: IP66; Sensor: IP6X	Local alarm notifications	Local alarm indication through notifications on the display and bright colored LED.
IP rating note	IP ratings do not imply that the equipment will detect gas during and after exposure to those conditions.	Displayed setpoints and diagnostics	Showing set points and diagnostic information.
Enclosure construction	Aluminium with coating, optional SS	4-20 mA output simulation	Simulation of the output signal (4-20 mA) for loop testing.
Dimensions	179 × 189 × 107 mm (H × W × D)	Self-diagnostics	Self-diagnostics included
Enclosure gas-sensor material	SS 316	Ex application zener-barrier note	The gas detector can be used in Ex applications (zone 1/2 and 21/22). without having a zener barrier. This reduces investment costs directly.
Weight	1.5 kg ± 5% (Al)	Source applications	Wastewater plants; Refineries; Confined spaces; Food industry; Marine; Silo storage; Steel industry
Pressure range	Toxic: Atmospheric ± 10%	Splashguard	Splashguard included
Certification directives	ATEX Directive 2014/34/EU; Electromagnetic Compatibility Directive 2014/30/EU	Connection diagram	Manufacturer page 4 Connections diagram retained as the source figure; terminal, earth, and bonding context is read from that diagram.
ATEX marking	II 2G Ex db IIC T6 Gb; II 2D Ex tb IIIC T85°C Db	Dimensions diagram	Manufacturer page 4 Dimensions diagram retained as the source figure.
ATEX certificate number (as printed)	KIWA 16ATEX0008 X	Drawing dimensions	Page 4 drawing: overall 218 mm; lower segment 92 mm; lower width 127 mm; top width 189 mm; depth 107 mm; hole diameter 7 mm.
IECEx marking	Ex db IIC T6 Gb; Ex tb IIIC T85°C Db	Overall height normalization	Unknown — source table height 179 mm conflicts with drawing overall height 218 mm; both raw roles are retained.
IECEx certificate number (as printed)	IECEx KIWA 16.0003X	Optional accessories	5150227-00A — Splash guard, Sensor protection against splash water; 5150228-00A — Inline flow adapter, Inline flow adapter for sample applications, connection 2×6 mm, SS; 5150226-00A — Protective hood, Protective hood SS, for optimal protection in “wet” protection areas, dim. 315×300×138 mm; 5150231-00A — Isolation set EMC/RFI, Isolation board, 160×160 mm; 5150225-00A — Protective bracket, SS bracket, extra protection for use in warehouses
Sensor datasheet note	More information can be found in the sensor datasheets.	Replacement sensors	5150234-00A — BUSENS D, type O_2, O_2, 0-25 Vol.%, Oxygen sensor; 5150235-00A — BUSENS D, type H_2S, H_2S, 0-30 ppm, Hydrogen sulfide sensor; 5150236-00A — BUSENS D, type H_2S, H_2S, 0-50/100 ppm, Hydrogen sulfide sensor; 5150237-00A — BUSENS D, type CO, CO, 0-100/0-500 ppm, Carbon monoxide sensor; 5150238-00A — BUSENS D, type H_2, H_2, 0-1000 ppm, Hydrogen ppm sensor; 5150239-00A — BUSENS D, type H_2, H_2, 0-100 %LEL, Hydrogen LEL sensor; 5101163-00A — BUSENS D, type NO, NO, 0-100 ppm, Nitric oxide sensor; 5101164-00A — BUSENS D, type NO_2, NO_2, 0-20 ppm, Nitrogen dioxide sensor
Hazardous-area note	For use in hazardous areas see Consilium ST450 Manual.	Non-main row source note	Manufacturer page 3 row identities are retained; compatibility is not inferred across rows.
Allowed Ex zones	Allowed in Ex zones 1 and 21	Dimension discrepancy	Unresolved source discrepancy: page 2 table gives height 179 mm; page 4 drawing gives overall height 218 mm. Both source roles are retained; no normalized overall height is asserted.
Applicable Ex zones	Ex applications (zone 1/2 and 21/22)	Image role	The only native product image in this ST450 EC source is shared by the family; it is not claimed as an exact SKU- or gas-specific photo.
Compatible systems	CGD50/500, CGS50/500		