

# SMART3G-D2

with electrochemical sensor

The SMART3G-D2 gas detector is designed to meet industrial requirements; the enclosure is explosion proof and can be installed in ATEX Zone 1 and, when equipped with dust adapter, in Zone 21.

The sensing element is placed in the stainless steel head with a 48 mm diameter. The electrochemical cell is used to detect toxic gas, due to the optimal performance in these applications.

The gas detector has a 12-24 Vdc power supply and a standard 4-20 mA 3-wires output and three relays. Optionally, the SMART3G-D2 can be equipped with serial RS485 communication.

The aluminium enclosure has dimensions 145 x 187 x 108 mm. The enclosure has 3 cable entries 3/4" NPT threaded. The SMART3G-D2 features a 7-segment display for real-time concentration visualization and Hall effect sensors for non-intrusive field calibration.

The gas detector can be ATEX marked as follows:

CE 0722 (Ex) II 2G Ex db IIC T5 Gb

Or, when equipped with dust adapter:

CE 0722 (Ex) II 2GD Ex db IIC T5 Gb  
Ex tb IIIC T5 T100°C Db  
IP65

The gas detector is IECEx compliant and can be marked as follows:

II 2G Ex db IIC T5 Gb

Or, when equipped with dust adapter:

II 2GD Ex db IIC T5 Gb  
Ex tb IIIC T5 T100°C Db  
IP65

SMART3G-D2 is SIL2 hardware and SIL3 software; with a redundant system also the hardware is SIL3.



## Sensor

Application	Industrial area, ATEX Zone 1 and Zone 21 (when equipped with dust adapter, optional)
Sensing element	Electrochemical cell
Predicted sensor lifetime	2 / 3 years
Gas detected	O <sub>2</sub> [0-25% Vol], CO [0-500/1000 ppm], NH <sub>3</sub> [0-100/200/1000/5000 ppm], H <sub>2</sub> S [0-50/100 ppm], NO [0 - 100 ppm]; H <sub>2</sub> [0 - 2000/3000 ppm]

## Electrical data

Power supply	12-24 Vdc
Output	Analogue 4-20 mA output; 1 or 3 relay board (optional); serial RS485 output (optional)
Maximum dissipated power	5.4 W
Relays contact ratings (optional board)	1.0 A at 30 Vdc
Optical indications	7-segment display, 5 status LED and 4 intelligent LED
Acoustic indications	-
Hall effect sensor	Three sensors for calibration by magnet

## Environmental conditions

Storage temperature	0 / +20°C up to 6 months
Operating temperature	-30 / +55°C
Operating humidity	15 / 90% RH non condensing

## External case

Material	Enclosure: aluminium pressure die-casting with epoxy paint chromating and chemically resistant Sensor head: stainless steel
Protection mode	Ex d : Explosion proof enclosure Ex t : Equipment dust ignition protection by enclosure (when equipped with dust adapter, optional)
Dimensions	145 x 187 x 128 mm
Weight	1900 g
Cable entries	3 x 3/4" NPT
IP grade	IP65

## Compliance

EMC	EN 61000-6-3:2007 + A1:2011; EN 50270:2015
ATEX	ATEX directive 2014/34/EU EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-31:2014
IECEX	IEC 60079-0:2011 IEC 60079-1:2014 IEC 60079-31:2013
SIL	EN 61508:2010 Parti 1, 2, 3, 4, 5, 6, 7 EN 50402:2017

# SMART3G-D2

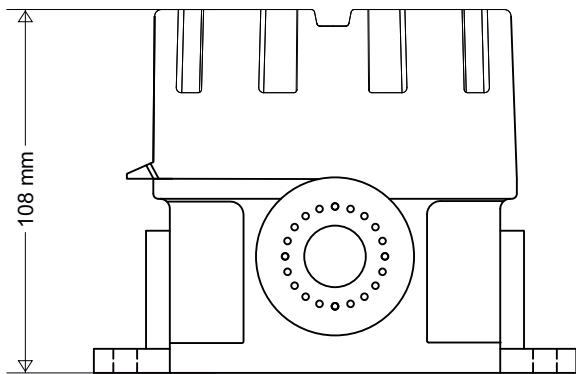
with electrochemical sensor

## Product codes

## ATEX code

S2643O2	Oxygen (0 - 25% Vol) gas detector	ST / LW / E3 / S3
S2163CO	CO (0-500 ppm) gas detector	ST / LW / E3 / S3
S2992CO	CO (0-1000 ppm) gas detector	ST / LW / E3 / S3
S3227AM	NH <sub>3</sub> (0-100 ppm) gas detector	ST / LW / E3 / S3
S2165AM	NH <sub>3</sub> (0-200 ppm) gas detector	ST / LW / E3 / S3
S2167AM	NH <sub>3</sub> (0-1000 ppm) gas detector	ST / LW / E3 / S3
S3231AM	NH <sub>3</sub> (0-5000 ppm) gas detector	ST / LW / E3 / S3
S2169HS	H <sub>2</sub> S (0-50 ppm) gas detector	ST / LW / E3 / S3
S2873HS	H <sub>2</sub> S (0-100 ppm) gas detector	ST / LW / E3 / S3
S2177NO	NO (0-100 ppm) gas detector	ST / LW / E3 / S3
S3313H2	H <sub>2</sub> (0-2000 ppm) gas detector	ST / LW / E3 / S3
S3395H2	H <sub>2</sub> (0-3000 ppm) gas detector	ST / LW / E3 / S3

## Mechanical Drawings



STG/AD3  
Dust adapter

