

# SMART3G-D3

## with electrochemical cell

SMART3G-D3 gas detector is designed to meet industrial requirements; the enclosure is explosion proof and can be installed in ATEX Zone 2 and, when equipped with dust adapter, in Zone 22.

The sensing element is placed in the stainless steel head with 47.5 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-D3 can be equipped with serial RS485 communication.

The enclosure has dimensions 106 x 160 x 81 mm, on the upper side there's a M20 cable gland. The SMART3G-D3 features a 7-segment display for real-time concentration visualization and Hall effect sensors for non-intrusive field calibration.

The gas detector is certification pending and it can be ATEX marked as follows:

CE 0722 Ex II 3G Ex db ec nC IIC T5 Gb

Or, when equipped with dust adapter:

CE 0722 Ex II 3GD Ex db ec nC IIC T5 Gb  
Ex tb IIIC T100°C Db  
IP65

SMART3G-D3 is SIL2 hardware and SIL3 software; with a redundant system also the hardware is SIL3.



### Sensor

Application	Industrial area, ATEX Zone 2 and Zone 22 (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; 3 relays; serial RS485 output (optional)
Maximum dissipated power	5.4 W
Relays contact ratings	1.0 A at 24 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 six months
Operating temperature	-30 / +50°C
Operating humidity	15 / 90% RH non condensing

### External case

Material	Enclosure: Aluminium Sensor head: stainless steel
Protection mode	Ex e: Increased safety protection mode Ex nC: Enclosed equipment protection mode Ex d : Explosion proof enclosure Ex t : Equipment dust ignition protection by enclosure (when equipped with dust adapter, optional)
Dimensions	106 x 160 x 81 mm
Weight	1210 g
Cable entries	1 x M20
IP grade	IP55 (certification pending)

### Compliance

EMC	EN 61000-6-3:2007 + A1:2011; EN 50270:2015
ATEX (certification pending)	ATEX directive 2014/34/EU EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-7:2015 EN 60079-15:2010 EN 60079-31:2014
SIL	EN 61508:2010 Parts 1, 2, 3, 4, 5, 6, 7 EN50402:2017

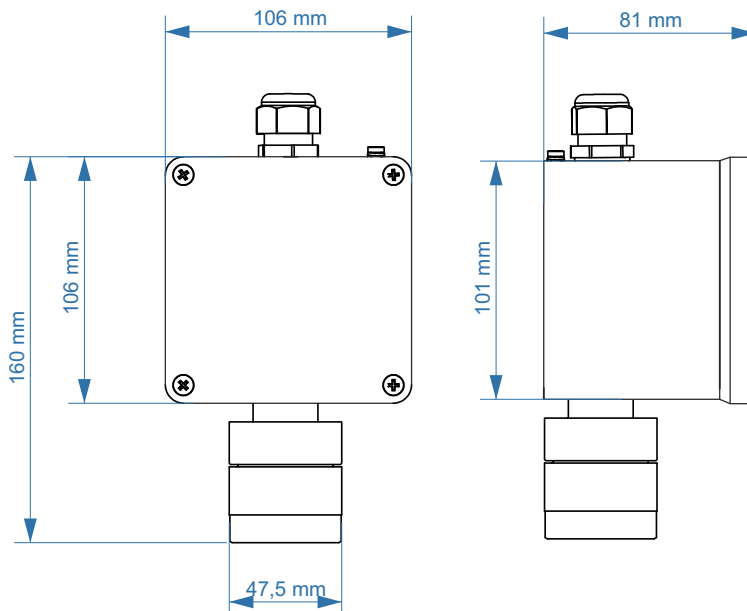
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## Product codes

S2642O2	Oxygen 0 - 25% Vol gas detector
S2162CO	CO 0-500 ppm gas detector
S3226AM	NH <sub>3</sub> 0-100 ppm gas detector
S2164AM	NH <sub>3</sub> 0-200 ppm gas detector
S2166AM	NH <sub>3</sub> 0-1000 ppm gas detector
S3230AM	RNH <sub>3</sub> 0-5000 ppm gas detector
S2168HS	H <sub>2</sub> S 0-50 ppm gas detector
S2176NO	NO 0-100 ppm gas detector
S3594H2	H <sub>2</sub> 0-2000 ppm gas detector
S4548H2	H <sub>2</sub> 0-3000 ppm gas detector

## Mechanical drawings



STG/AD3  
dust adapter

