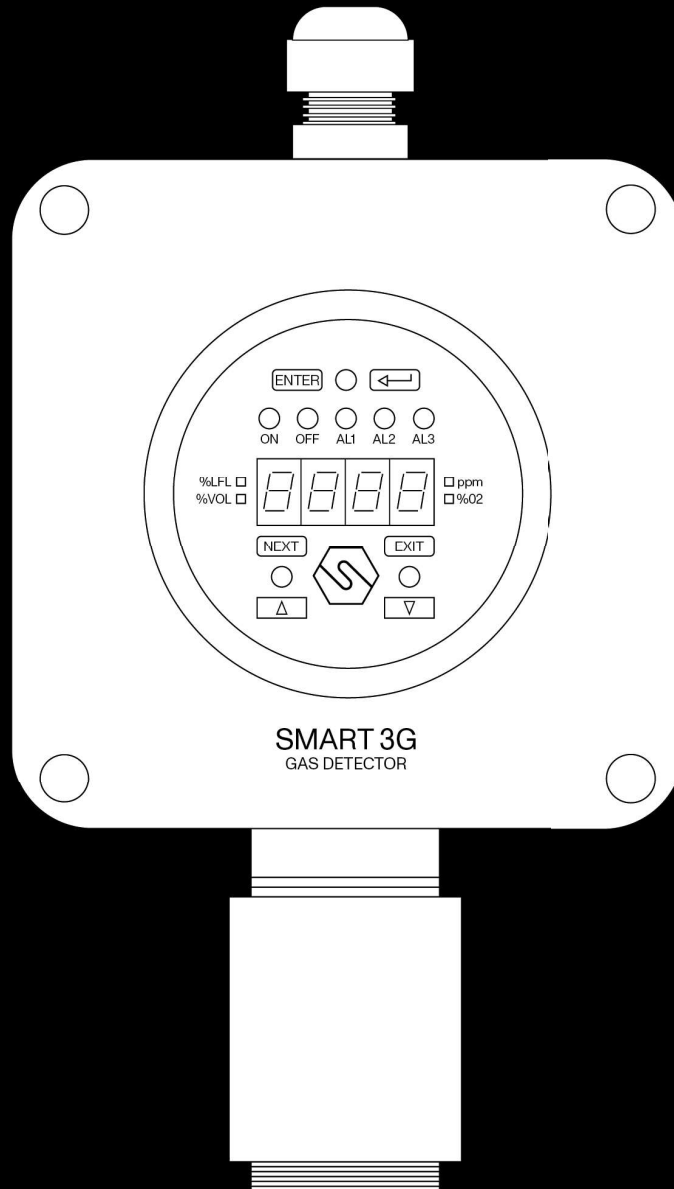


SMART 3G-D3

With photoionizator sensor



Datasheet





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 PID sensors employed for the Volatile Organic Compound are able to detect lower gas concentration than most of other technologies.

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 106 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 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 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 e Zone 22 (when equipped with dust adapter, optional)
Sensing element	Photoionizator (PID)
Predicted sensor lifetime	>5 years
Lamp lifetime	Versions with FS 20 and 200 ppm: 10000 hours Versions with FS 2000 ppm: 6000 hours
Gas detected	Volatile Organic Compounds (VOC) having photoionization potential up to 10.8 eV
Full scale	0 - 20 ppm (Isobutylene) 0 - 200 ppm (Isobutylene) 0 - 2000 ppm (Isobutylene)

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

Operating and storage temperature	Versions with FS 20 and 200 ppm: -40 / +65°C Versions with FS 2000 ppm: -20 / +60°C
Operating humidity (non condensing)	Versions with FS 20 and 200 ppm: 5 / 95% RH Versions with FS 2000 ppm: 5 / 90% RH @40°C

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 106 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

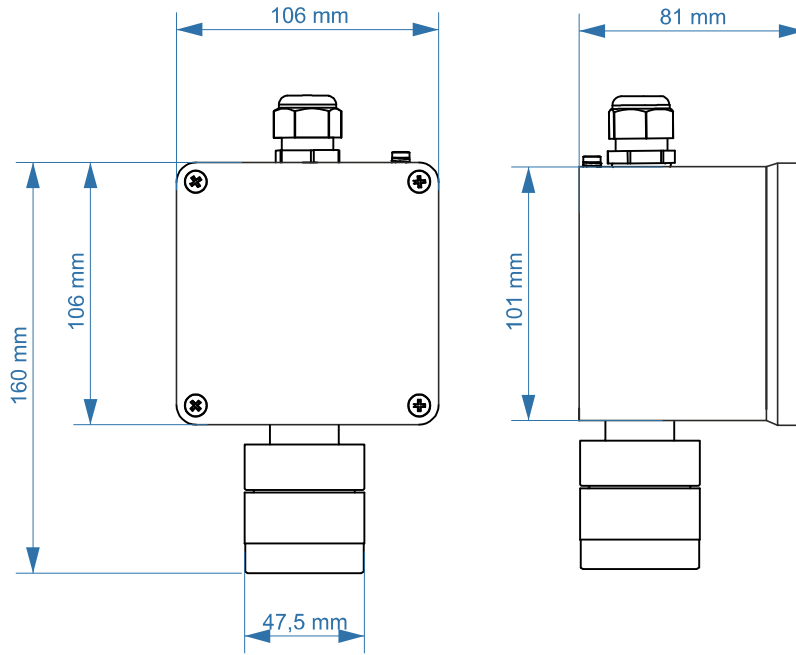
Product codes

Volatile Organic Compounds detectors, 12-24 Vdc

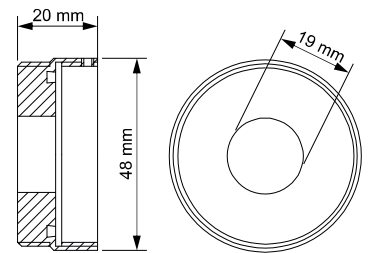
S3542IL	Isobutylene (0-20 ppm) gas detector
S3546IL	Isobutylene (0-200 ppm) gas detector
S5123IL	Isobutylene (0-2000 ppm) gas detector



Mechanical drawings



STG/AD3 dust adapter



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