SENSITRON
A Halma Company

SMART 3G-C3
Datasheet

DS4746
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Datasheet

SMART 3G-C3

with catalytic sensor

SMART 3G
GAS DETECTOR

Datasheet

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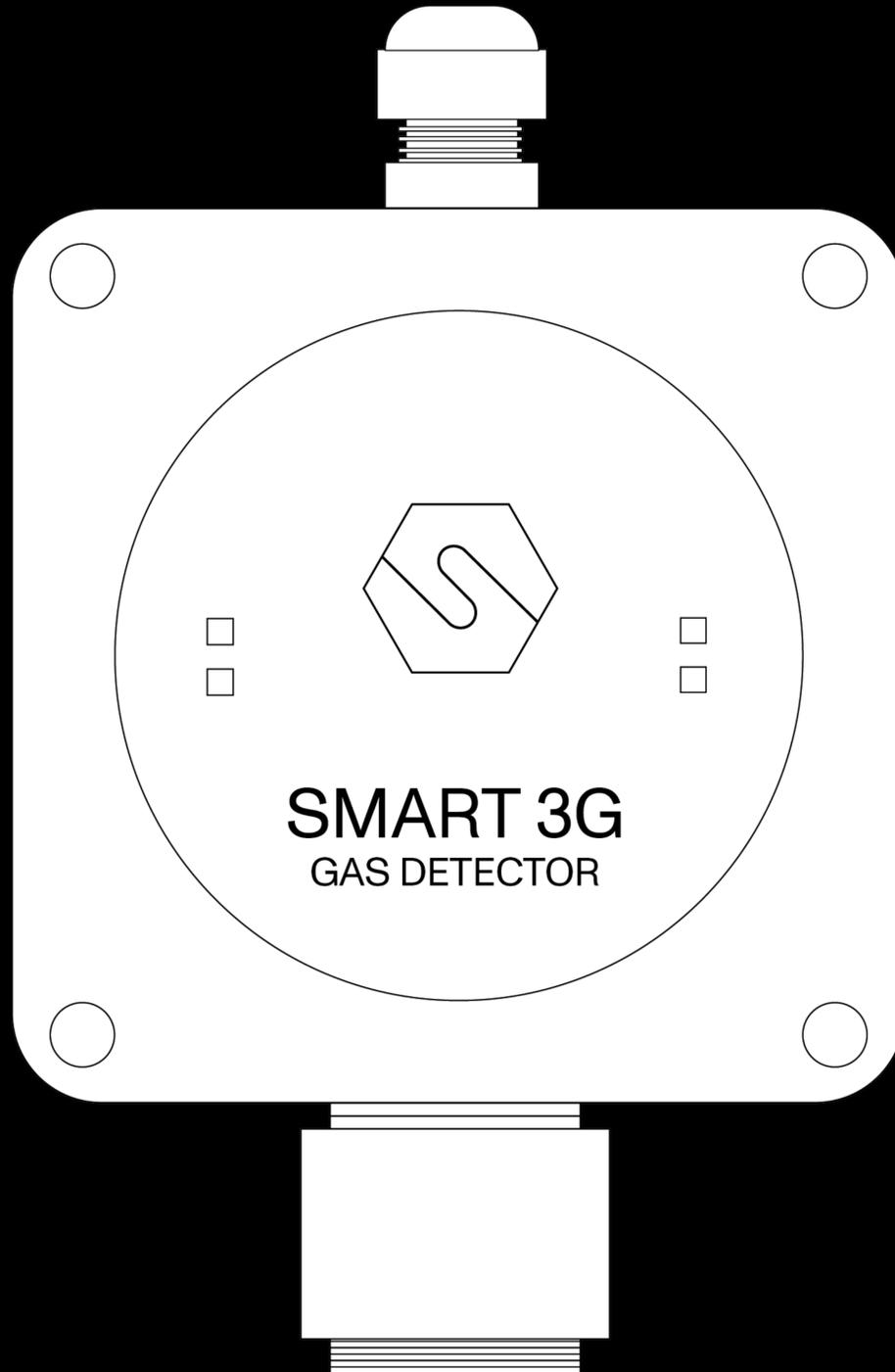SMART 3G-C3

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SMART3G-C3 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 40 mm diameter. The pellistor sensors employed for the flammable gas detection show an excellent output linearity up to 100% LEL and fast time of response.

The gas detector has a 12-24 Vdc power supply and a standard 4-20 mA 3-wires output. Optionally, the SMART3G-C3 can be equipped with serial RS485 communication and a 1 or 3 relays board.

The enclosure has dimensions 106 x 137 x 62 mm, on the upper side there's a M20 cable gland.
The gas detector can be ATEX marked as follows:

CE (Ex) II 3G
Ex db ec IIC T5 Gc

Or, when equipped with dust adapter:

CE (Ex) II 3D
II 3G
Ex db ec IIC T5 Gc
Ex tc IIIC T100°C Dc   IP65

SMART3G-C3 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	Catalytic
Predicted sensor lifetime	4 / 5 years
Gas detected	Methane, LPG, Propane, Butane, Petrol Vapours, Hydrogen, Ethyl alcohol
Full scale	0 - 100% LFL

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	1.0 A at 24 Vdc (optional board)
Optical indications	-
Acoustic indications	-
Hall effect sensor	-

Environmental conditions

Storage temperature	-40 / +85°C
Operating temperature	-20 / +60°C
Operating humidity	0 / 90% RH

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External case

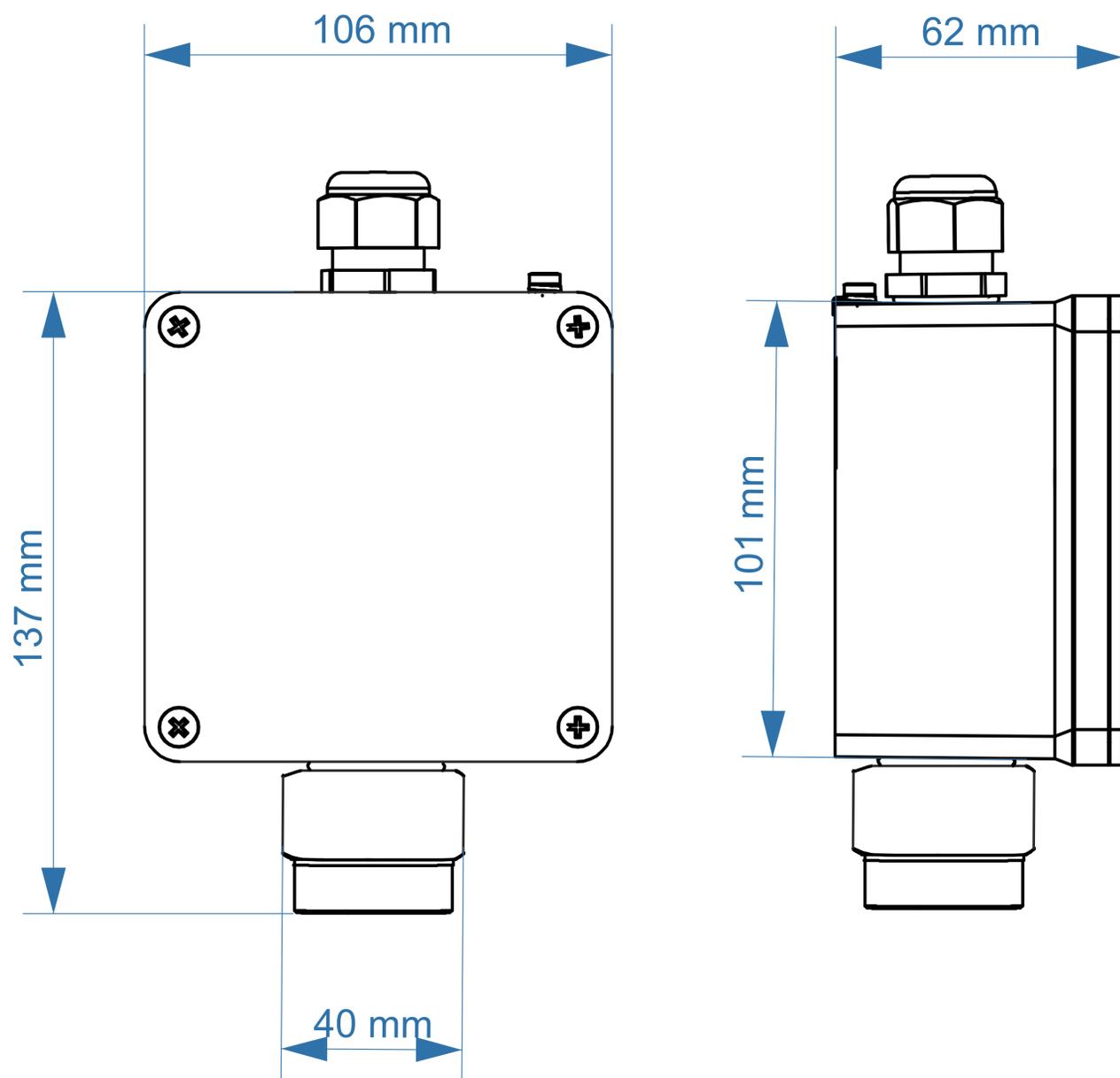|	
Material	Enclosure: Aluminium Sensor head: stainless steel
Protection mode	Ex e: Increased safety protection mode Ex nC: Enclosed equipment protection mode Ex d : Explosion proof enclosure Ex t : Equipment dust ignition protection by enclosure (when equipped with dust adapter, optional)
Dimensions	106 x 137 x 62 mm
Weight	760 g
Cable entries	1 x M20
IP grade	IP65 (with dust adapter)

Compliance

EMC	EN 61000-6-3:2007 + A1:2011; EN 50270:2015
ATEX	ATEX directive 2014/34/UE 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

S2096ME	Methane gas detector, 12-24 Vdc
S2096GP	LPG gas detector, 12-24 Vdc
S2096PR	Propane gas detector, 12-24 Vdc
S2096BU	Butane gas detector, 12-24 Vdc
S2096VB	Petrol vapours gas detector, 12-24 Vdc
S2096H2	Hydrogen gas detector, 12-24 Vdc
S2096ET	Ethyl alcohol gas detector, 12-24 Vdc

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Mechanical drawings

106 mm

62 mm

137 mm

101 mm

40 mm

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