SENSITRON
A Halma Company

SMART 3G-D3
Datasheet

DS4830
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Datasheet

SMART 3G-D3

with catalytic sensor

SMART 3G
GAS DETECTOR

Datasheet

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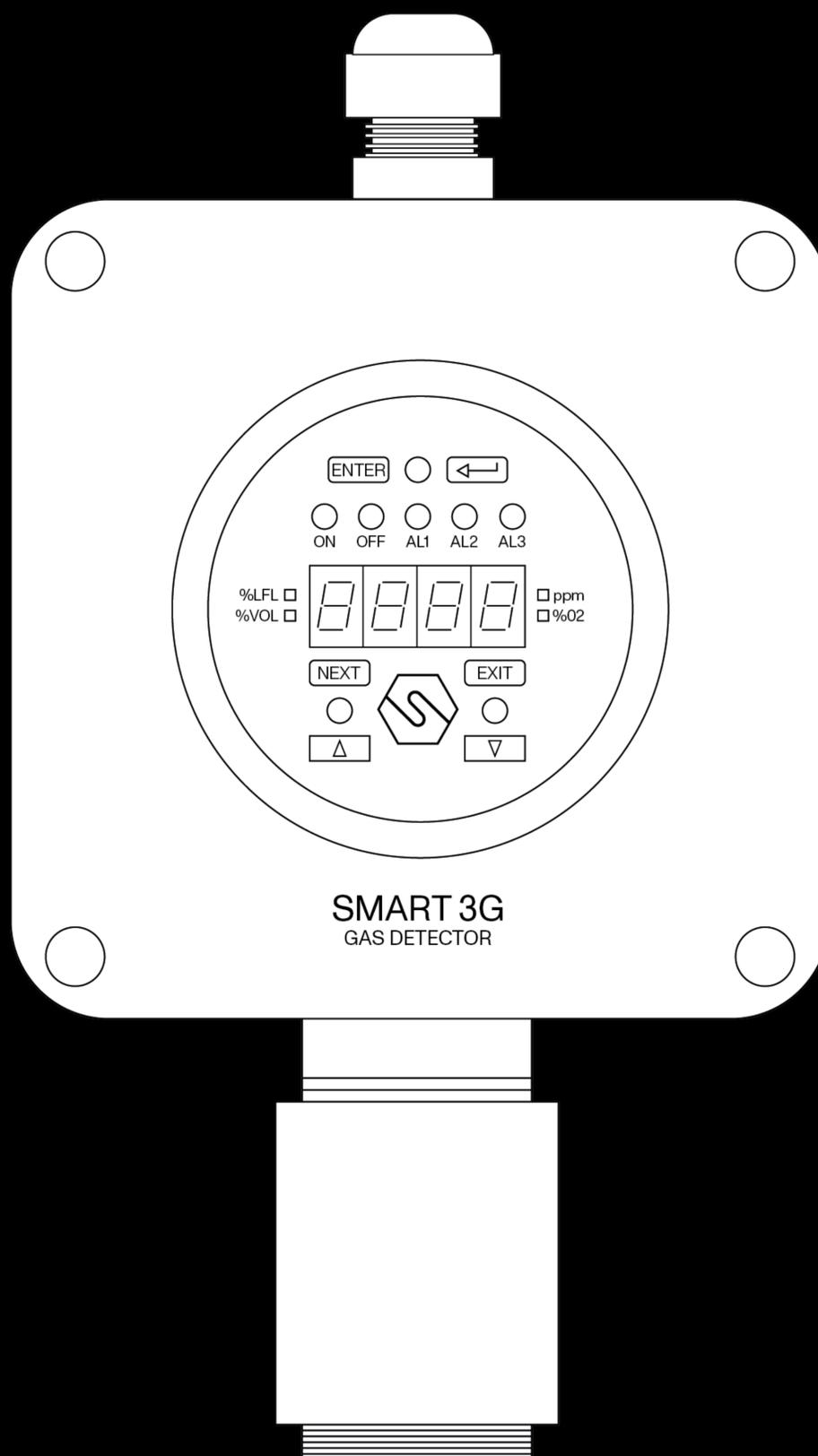SMART 3G-D3

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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 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 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 can be ATEX marked as follows:

CE ⟨Ex⟩ II 3G
Ex db ec nC IIC T6 Gc

Or, when equipped with dust adapter:
CE ⟨Ex⟩ II 3D
II 3G
Ex db ec nC IIC T6 Gc
Ex tc IIIC T85°C Dc   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	Catalytic
Estimated sensor lifetime	4 / 5 years
Gas detected	Methane, LPG, Propane, Butane, Petrol Vapours
Full scale	0 - 100% LFL

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	-40 / +85°C
Operating temperature	-40 / +45°C
Operating humidity	0 / 90% RH

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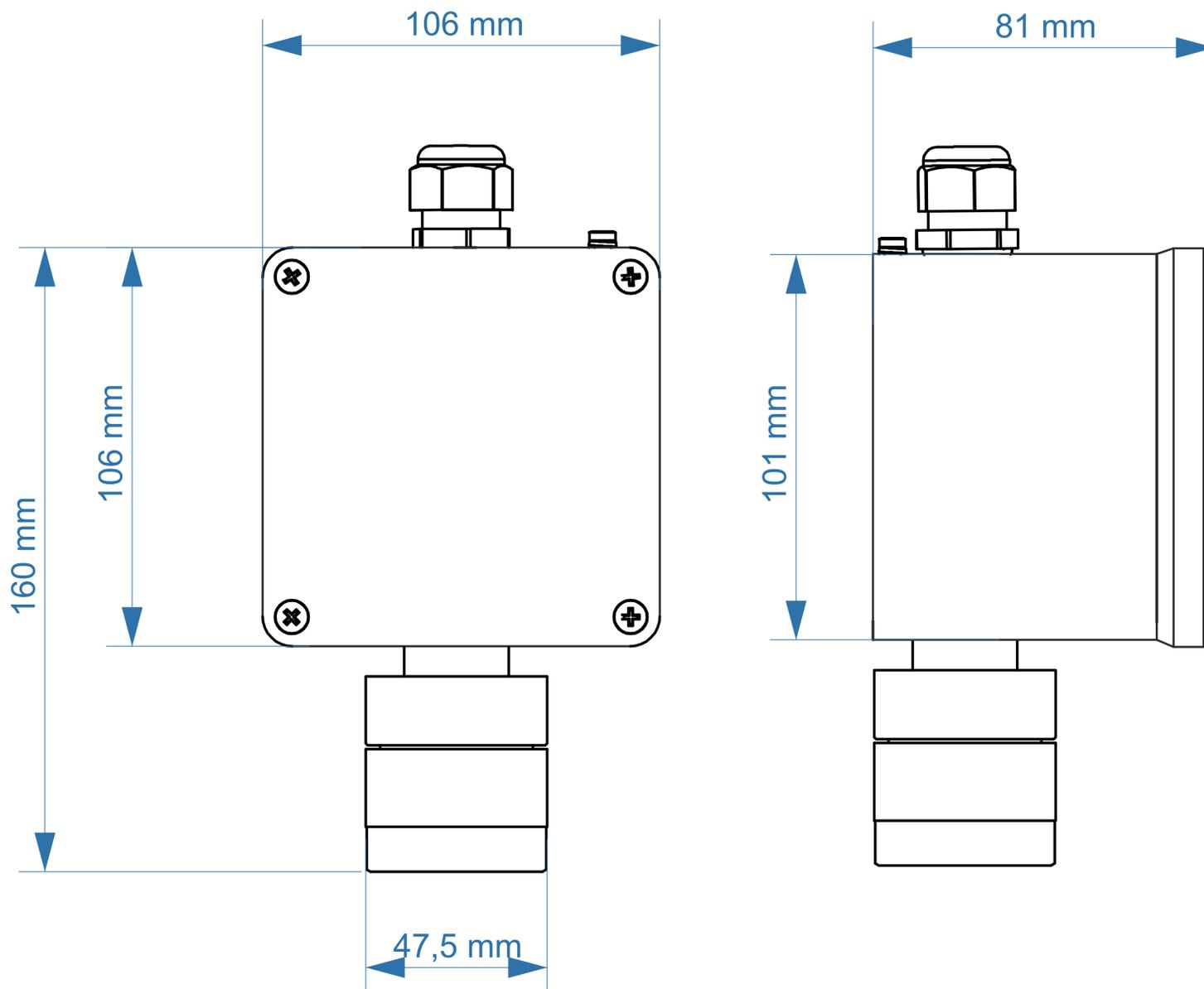| External case	
Material	Enclosure: Aluminium Sensor head: stainless steel
Protection mode	Ex e: Increased safety protection mode Ex nC: Enclosed equipment protection mode Ex d : Explosion proof enclosure Ex t : Equipment dust ignition protection by enclosure (when equipped with dust adapter, optional)
Dimensions	106 x 160 x 81 mm
Weight	1210 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/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	
S2156ME	Methane gas detector, 12-24 Vdc
S2156GP	LPG gas detector, 12-24 Vdc
S2156PR	Propane gas detector, 12-24 Vdc
S2156BU	Butane gas detector, 12-24 Vdc
S2156VB	Petrol vapours gas detector, 12-24 Vdc

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Mechanical drawings

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Contatti/Contacts

Viale della Repubblica, 48
20007 Cornaredo (MI) – ITALY

+39 0293548155
sales@sensitron.it
sensitron.it

Sensitron S.r.l.

DS4830
Sensitron S.r.l., Viale della Repubblica 48, Cornaredo (MI)
sales@sensitron.it
TEL. +390293548155 FAX. +390293548089