SENSITRON
A Halma Company

SMART 3G-C3
Datasheet

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Datasheet

SMART 3G-C3

with infrared sensor

SMART 3G
GAS DETECTOR

Datasheet

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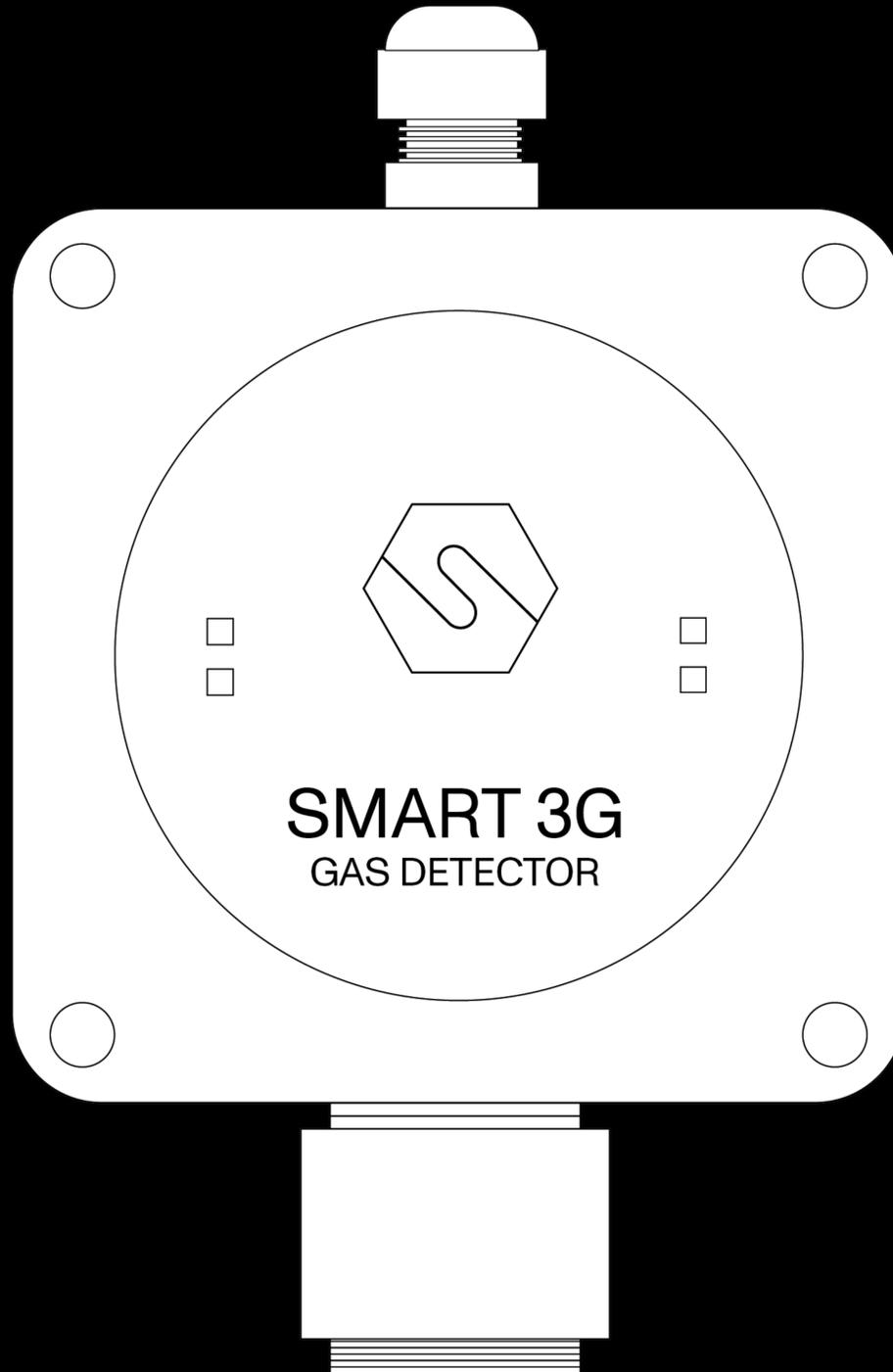SMART 3G-C3

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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 infrared sensors employed for the flammable and refrigerant gas detection are poison free, with high accuracy and a long lifetime.

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 160 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 e Zone 22 (when equipped with dust adapter, optional)
Sensing element	Infrared
Predicted sensor lifetime	>5 years
Gas detected	Flammable, refrigerant and CO_2
Full scale	0 - 100% LFL flammable gas 0 - 2000 ppm refrigerant gas 0-2%Vol; 0-5%Vol; 0-30%Vol; 0-100%Vol CO_2

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	-40 / +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 160 x 62 mm
Weight	1023 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

Flammable gas detectors 0-100% LFL, 12-24 Vdc

S2623ME	Methane (0-100%LFL) gas detector
S2653BU	Butane (0-100%LFL) gas detector
S2653PR	Propane (0-100%LFL) gas detector
S2653GP	LPG (0-100%LFL) gas detector
S2653R454B	R454B (0-100%LFL) gas detector
S3424R32	R32 (0-100%LFL) gas detector
S3428R1234YF	R1234YF (0-100%LFL) gas detector
S3432R1234ZE	R1234ZE (0-100%LFL) gas detector

Refrigerant gas detectors 0-2000 ppm, 12-24 Vdc

S3942R32	R32 (0 - 2000 ppm) gas detector
S3595R134A	DS134A (0 - 2000 ppm) gas detector
S3598SF6	SF6 (0 - 2000 ppm) gas detector
S3020R125	R125 (0 - 2000 ppm) gas detector
S3021R1234YF	R1234YF (0 - 2000 ppm) gas detector
S3025R1234ZE	R1234ZE (0 - 2000 ppm) gas detector
S3022R404A	R404A (0 - 2000 ppm) gas detector

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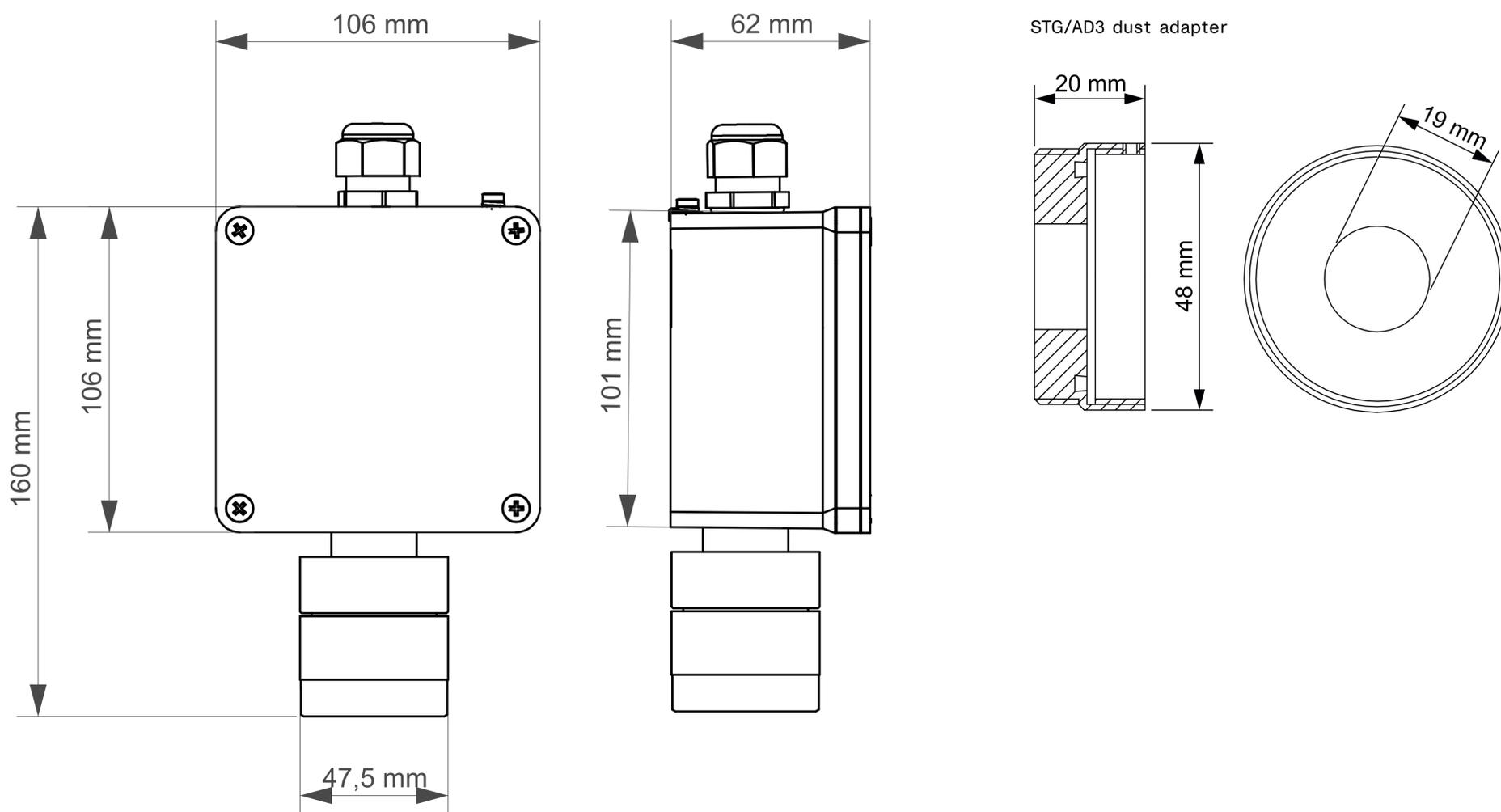Datasheet (EN)
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Product codes

S3023R407A	R407A (0 - 2000 ppm) gas detector
S3918R407F	R407F (0 - 2000 ppm) gas detector
S3921R449A	R449A (0 - 2000 ppm) gas detector
S3024R507	R507 (0 - 2000 ppm) gas detector
S3016R410A	R410A (0 - 2000 ppm) gas detector
S3950R417A	R417A (0 - 2000 ppm) gas detector
S3954R448	R448 (0 - 2000 ppm) gas detector
Carbon dioxide gas detectors, 12-24 Vdc	
S2649CO2	CO_2 (0-2% Vol)gas detector
S2650CO2	CO_2 (0-5% Vol) gas detector
S2444CO2	CO_2 (0-30% Vol) gas detector
S2444CO2	CO_2 (0-5000 ppm) gas detector
S2629CO2	CO_2 (0-100% Vol) gas detector

Mechanical drawings

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