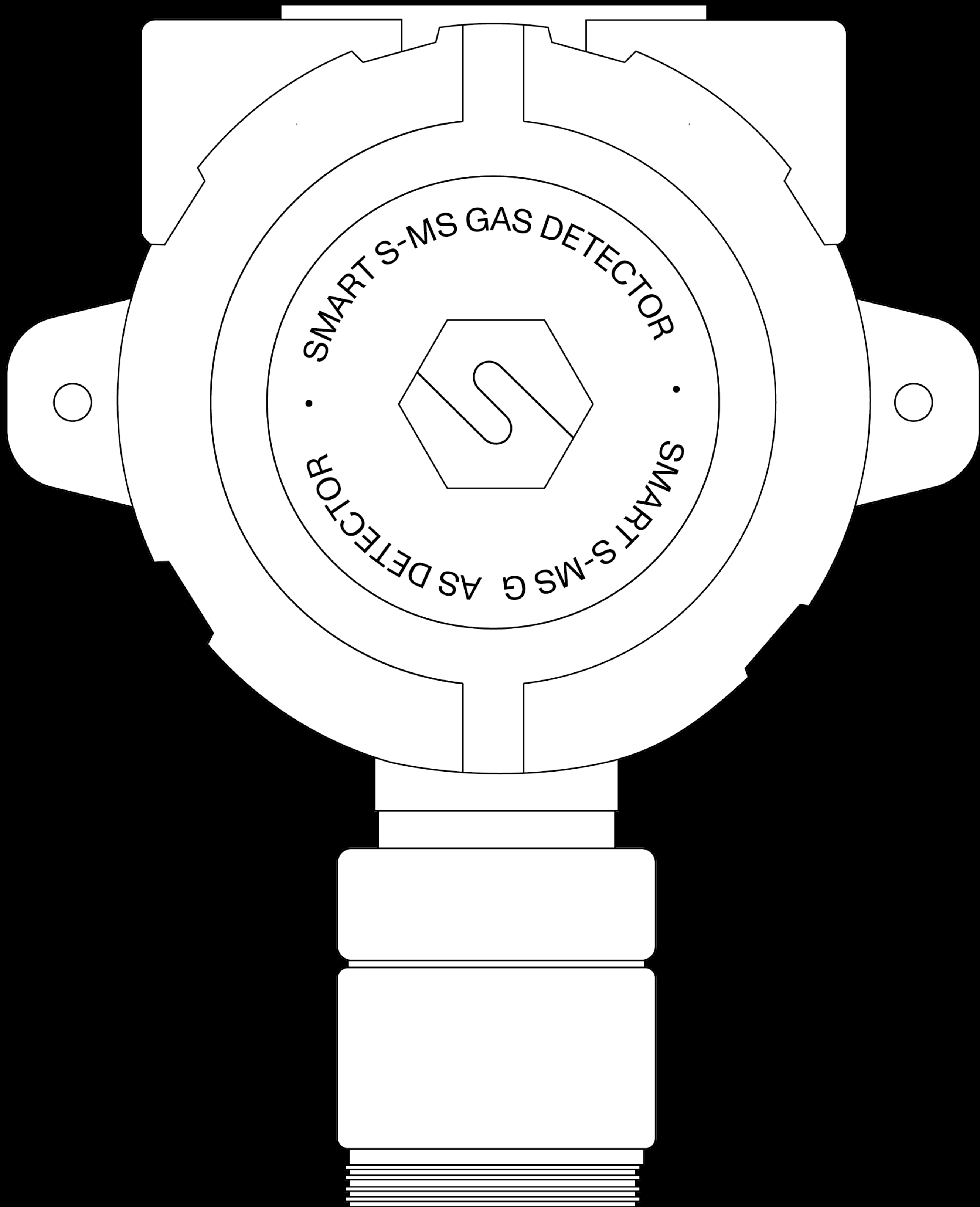


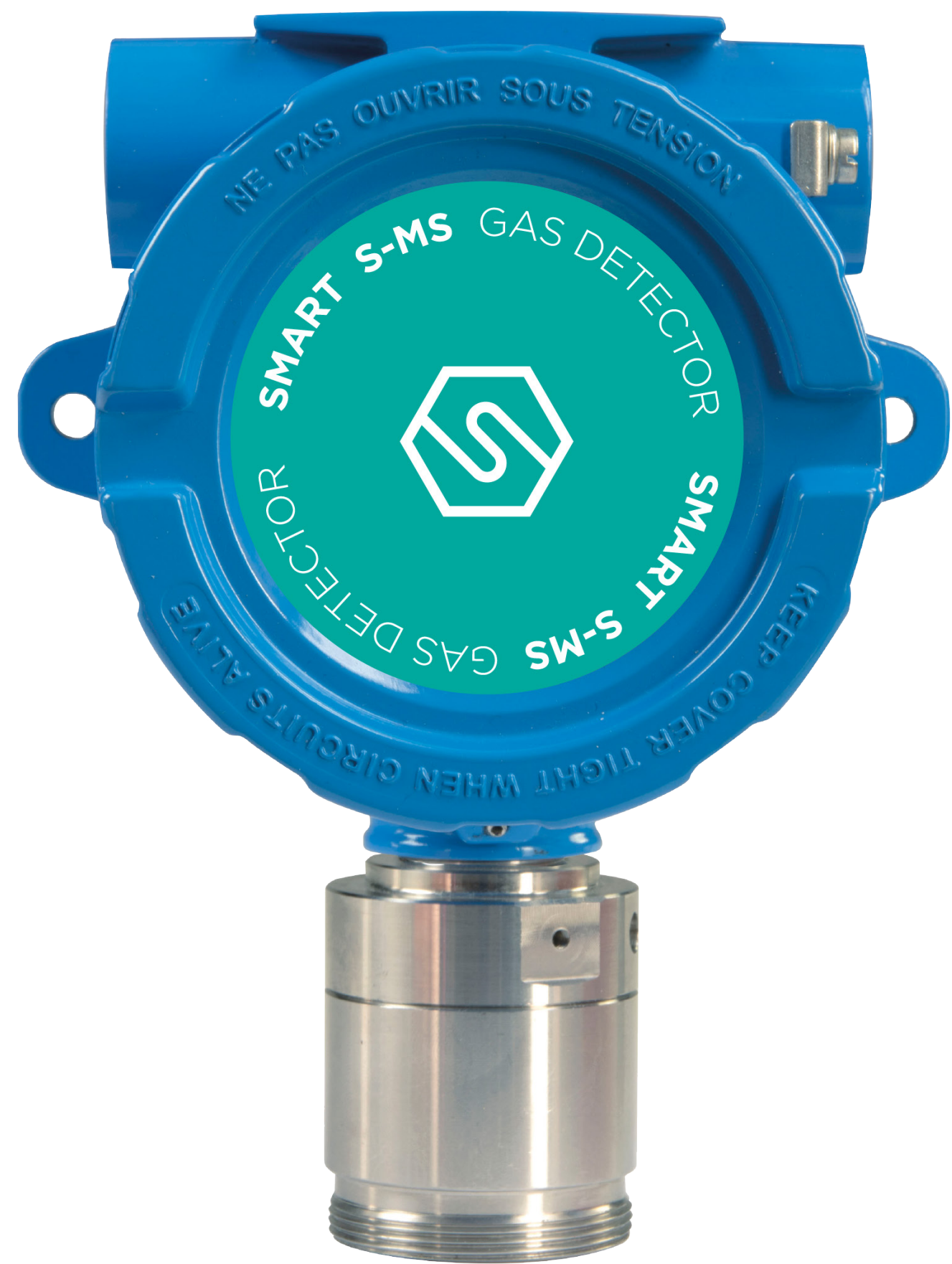
SMART S-MS MED

With infrared sensor



Datasheet





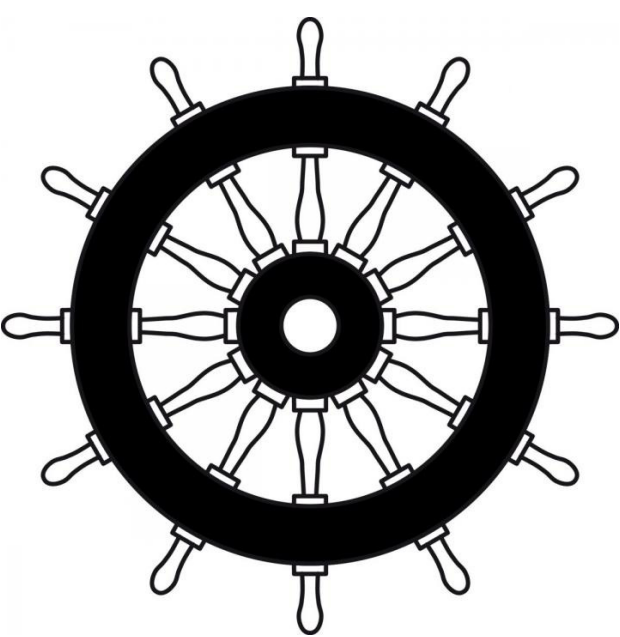
Designed to meet with the harshest conditions of Marine environments, SMART S-MS MED allows to monitor flammable gas contents. The infrared sensors employed for the flammable gas detection are poison free, with high accuracy and a long lifetime. The sensing element is housed in the stainless steel head with a 47.5 mm diameter. The gas detector has a 12-24 Vdc power supply, a 4-20 mA output, a serial RS485 output and it can be equipped with 3 relays. The aluminium enclosure has dimensions 145 x 187 x 108 mm. All the cable entries are 3/4” NPT threaded.

The gas detector 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 T5 T100°C Db
IP65

The gas detector is IECEx complaint and can be marked as follows:
II 2G Ex db IIC T5 Gb

Or, when equipped with dust adapter:
II 2GD Ex db IIC T5 Gb
Ex tb IIIC T5 T100°C Db
IP65



2923/2022



SMART S-MS MED is SIL2 hardware and SIL3 software; with a redundant system also the hardware is SIL3.

Sensor	
Application	Marine environments
Sensing element	Infrared
Predicted sensor lifetime	> 5 years
Gas detected	Flammable gases and refrigerant gases
Fullscale	0 - 100% LFL flammable gases 0 - 2000 ppm refrigerant gases

Electrical data	
Power supply	12-24 Vdc
Output	Analogue 4-20 mA output ; serial RS485 output; 3 relays output (optional);
Maximum dissipated power	5.4 W
Relays contact ratings	1.0 A a 24 Vdc
Optical indications	-
Acoustic indications	-
Hall effect sensor	-

Environmental conditions

Storage temperature	-40 / +85°C
Operating temperature	-40 / +60°C *
Operating humidity	20 / 90% RH @40°C *
Operating pressure	86 / 120 kPa *
Air velocity	6 m/s *
Time of response	t ₉₀ < 60 s ; t ₅₀ < 20 s *

* Data tested with tests described in EN 60079-29-1 standard

External case

Material	Enclosure: aluminium pressure die-casting with epoxy paint chromating and chemically resistant Sensor head: stainless steel
Protection mode	Ex d : Explosion proof enclosure Ex t : Equipment dust ignition protection by enclosure (when equipped with dust adapter, optional)
Dimensions	145 x 187 x 108 mm
Weight	1500 g
Cable entries	2 x 3/4” NPT
IP grade	IP65

Compliance

MED	MED Directive 2014/90/EU IEC 60092-504:2016 IEC 60533:2015
CCS	Chapter 3, Part Six of China Classification Society “Rules for Classification of See-going Steel Ships” 202 Chapter 1&2, Part Four of China Classification Society Rules for Classification of Sea-Going Steel Ships 2022 Chapter II-2 of SOLAS IEC 60079-29-1: 2020
ATEX	ATEX Directive 2014/34/UE EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-31:2014 EN 60079-29-1:2016
IECEX	IEC 60079-0:2011 IEC 60079-1:2014 IEC 60079-31:2013
SIL	EN 61508:2010 Parti 1, 2, 3, 4, 5, 6, 7 EN50402:2017

To order a SMART S-MS MED detector it’s required to combine the electronic in the aluminium enclosure and the sensor head.
The ATEX code on the label will be always:

ST | LB | ES | S3

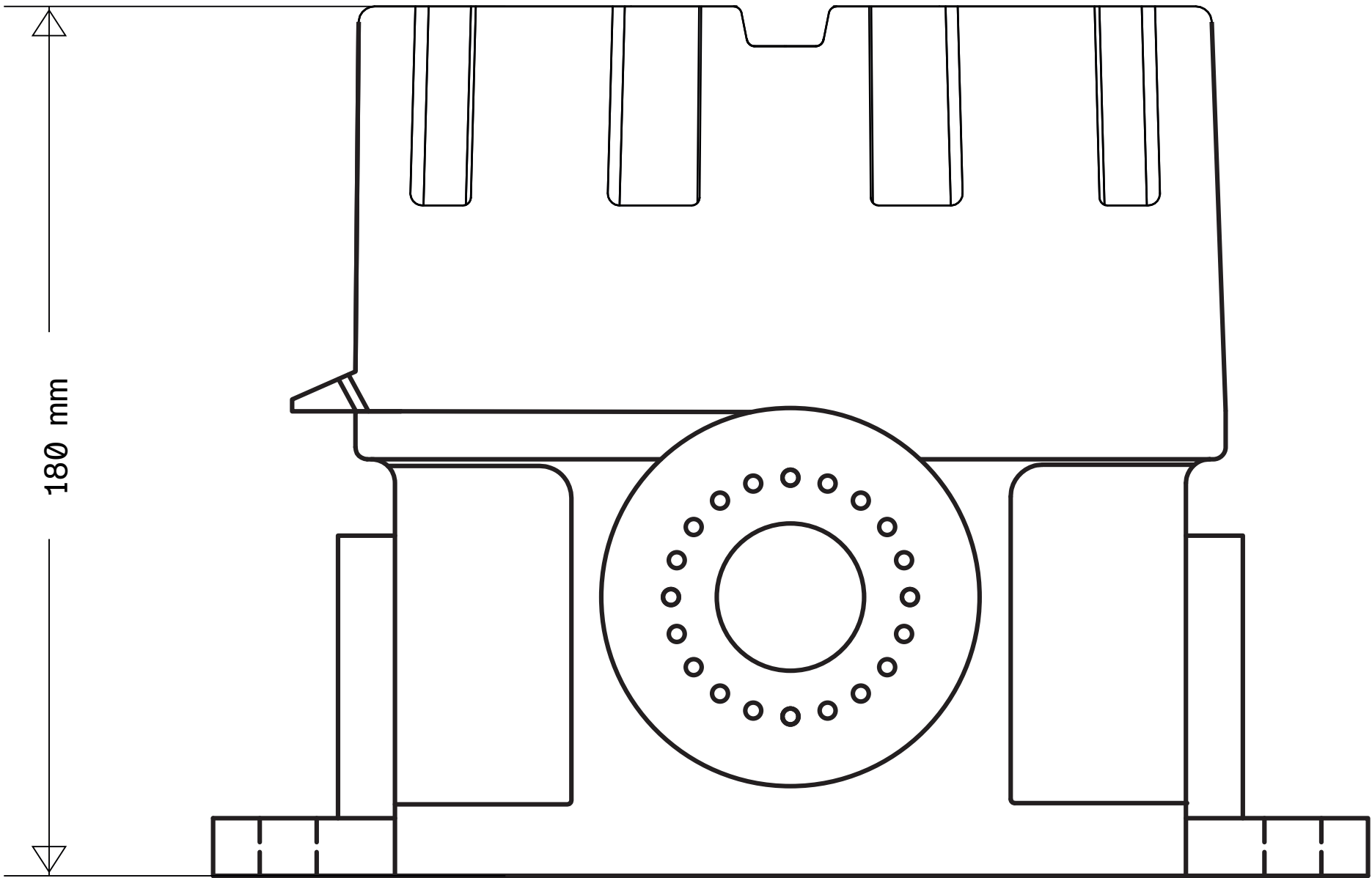
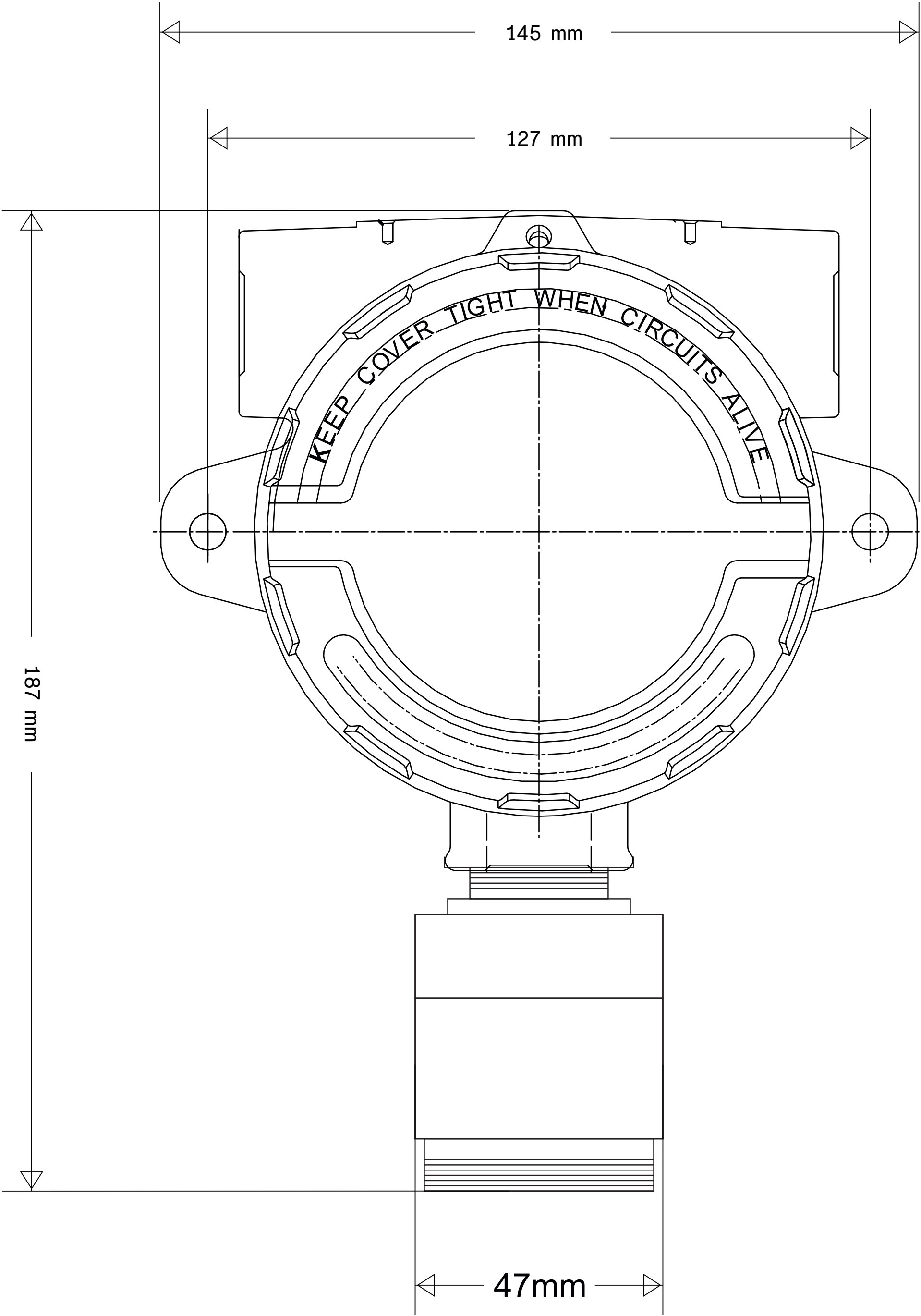
Product codes	
SMS3A11MED	Electronic with1 output RS485 and 4-20 mA MED certified
SMS3A11CCS	Electronic with1 output RS485 and 4-20 mA CCS certified
SMS3A13MED	Electronic with1 output RS485 and 4-20 mA, 3 relays MED certified
SMS3A13CCS	Electronic with1 output RS485 and 4-20 mA, 3 relays CCS certified

Sensor head codes (flammable gases 0-100% LFL)	
S4019ME	METHANE
S4004PR	PROPANE
S4004BU	BUTANE
S4004AT	ACETONE
S4004DT	DIMETHYL ETHER
S4004ET	ETHYIL ALCOHOL
S4004PE	PENTANE
S4004PP	PROPYLENE
S4004VB	PETROL VAPOUR
S4065R32	R32
S4066R1234YF	R1234yf
S4067R1234ZE	R1234ze

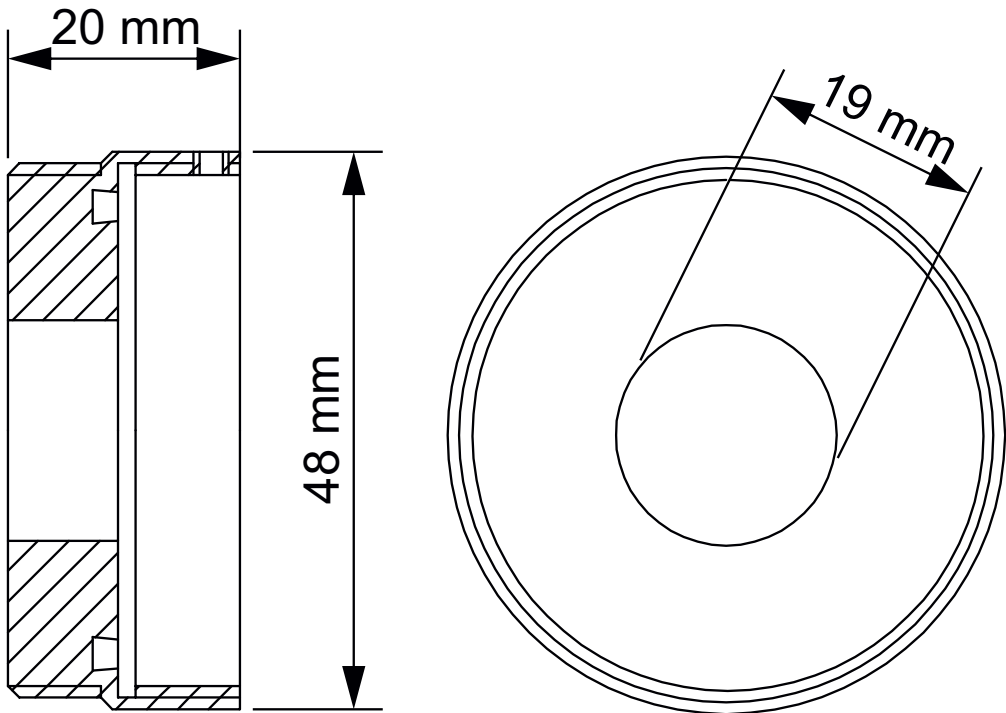
Sensor head codes (refrigerant gases 0-2000 ppm)	
S4152R32	R32
S4026R134A	R134A
S4031R125	R125
S4033R404A	R404A
S4034R407A	R407A
S4034R407F	R407F
S4154R449A	R449A
S4035R507A	R507A
S4036R410A	R410A
S4155R417A	R417A



Disegni meccanici



Adattatore per polveri STG/AD3



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