



SMART3G-C2 With catalytic sensor For Flammable Gases

SMART3G-C2 gas detector is designed to meet industrial requirements; the enclosure is explosion proof and can be installed in ATEX Zone 1 (Class I Division 1) and, when equipped with dust adapter, in Zone 21 (Class II Division 1). The sensing element is placed in the stainless steel head. This product has two type heads with different dimensions: the model “Type head 2” has a 40 mm diameter, the “Type head 3” version has a 48 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-C2 can be equipped with serial RS485 communication and a 1 or 3 relay board. The aluminum enclosure has dimensions 120 x 162 x 90 mm when equipped with type head 2, 120 x 184 x 90 mm when the head type 3 is used. The enclosure has 3 cable entries 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 T100°C Db
IP65

The gas detector is IECEx compliant and can be marked as follows:
Ex db IIC T5 Gb

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

SMART3G-C2 is SIL2 hardware and SIL3 software; with a redundant system also the hardware is SIL3.
Software compliance for safety critical systems.

Sensor	
Application	Industrial area, ATEX Zone 1 (Class I Division 1) and Zone 21 (Class II Division 1) (when equipped with dust adapter, optional)
Sensing element	Catalytic
Predicted sensor lifetime	4 / 5 years
Gas detected	Flammable gas
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
relay contact ratings (optional board)	1.0 A at 24 Vdc
Optical indications	-
Acoustic indications	-
Hall effect sensor	-

Environmental conditions	
Storage temperature	-40 to185°F (-40 / +85°C)
Operating temperature	-40 to 140°F (-40 / +60°C) * with type head 3 -4 to 140°F (-20 / +60°C) * with type head 2 codes with -HT have Tmax=70°C
Operating humidity	20 / 90% RH @40°C *
Operating pressure	80 / 120 kPa *
Air velocity	6 m/s *
Time of response	t90 < 60 s ; t50 < 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	With type head 2: 4.72 x 6.37 x 3.54 in (120 x 162 x 90 mm) With type head 3: 4.72 x 7.24 x 3.54 in (120 x 184 x 90 mm)
Weight	With type head 2: 2.3lb (1050 g) With type head 3: 2.75lb (1250 g)
Cable entries	3 x 3/4” NPT
IP grade	IP65



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 60079-31:2014 EN 60079-29-1:2016
IECEX	IEC 60079-0:2011 IEC 60079-1:2014 IEC 60079-31:2013
SIL	EN 61508:2010 Parts 1, 2, 3, 4, 5, 6, 7 EN50402:2017

Product codes		Codice ATEX
S2097ME	Methane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097GP	LPG gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097PR	Propane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097BU	Butane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097VB	Petrol vapours gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097AA	Acetic acid gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097AT	Acetone gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097AB	Butyl acetate gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097BT	butyl alcohol gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097CE	Cyclohexane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097CP	Cyclopentane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097EN	Ethane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097AE	Ethyl acetate gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097ET	Ethyl alcohol gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097EE	Ethyl ether gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097EL	Ethylene gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097EP	Heptane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097ES	Hexane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097H2	Hydrogen gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097IB	Isobutane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097IT	Isobutyl alcohol gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097IN	Iso pentane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097IP	Iso propyl alcohol gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097MT	Methyl alcohol gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097MK	Methyl Ethyl ketone gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097NN	Nonane gas detector, 12-24 Vdc	ST / L / E3 / S2

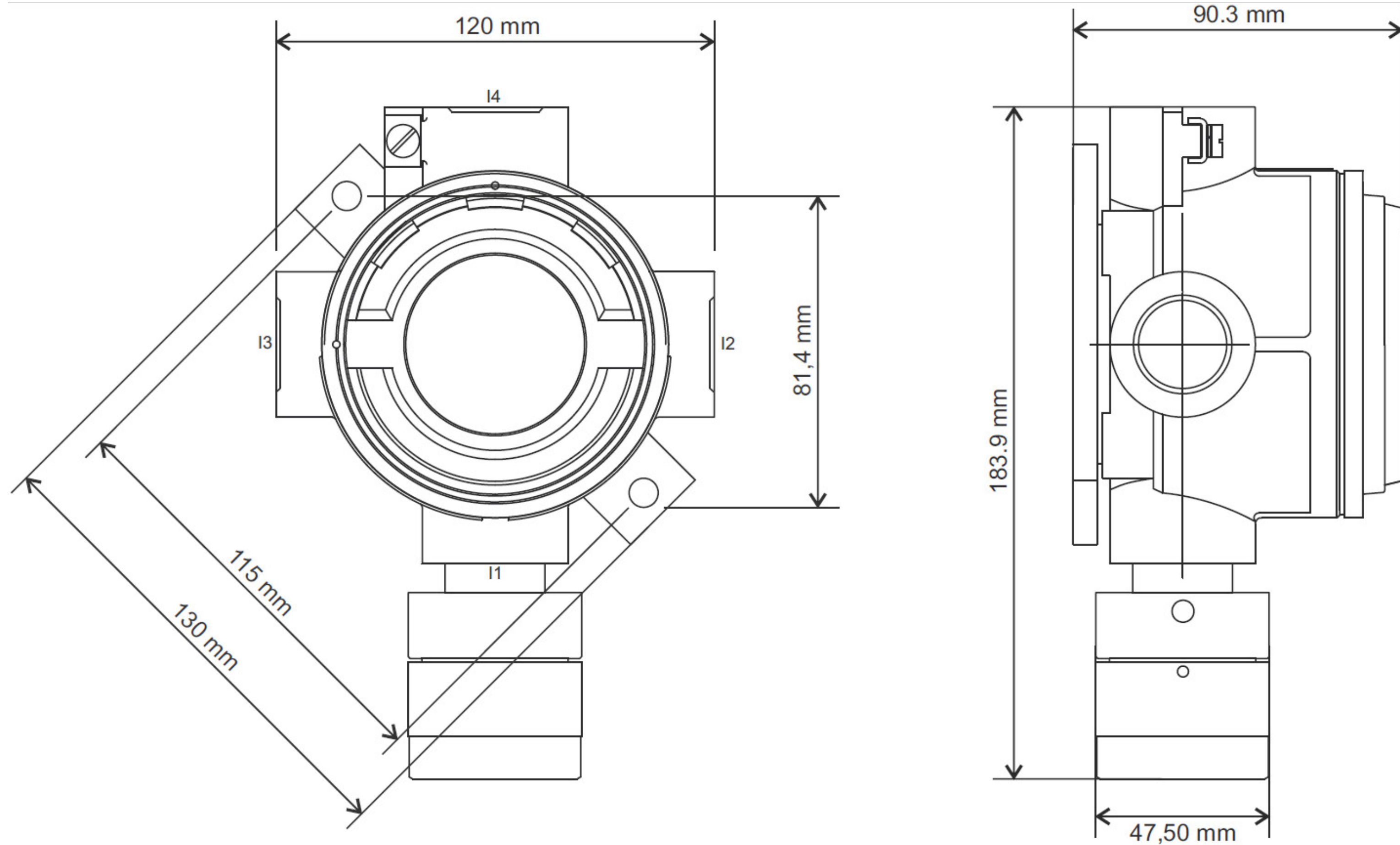


Product codes		Codice ATEX
S2097PE	Pentane gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097PP	Propylene gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097PN	Propyl alcohol gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097TM	Trimethylbenzene gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097TO	Toluene gas detector, 12-24 Vdc	ST / L / E3 / S2
S2097XI	Xylene gas detector, 12-24 Vdc	ST / L / E3 / S2
S2151AC	Acetylene gas detector, 12-24 Vdc	ST / L / E3 / S3
S2155AA	Acetic acid gas detector, 12-24Vdc	ST / L / E3 / S3
S2155AM	Ammonia gas detector, 12-24 Vdc	ST / L / E3 / S3
S2155BZ	Benzene gas detector, 12-24 Vdc	ST / L / E3 / S3
S2155OE	Ethylene oxide gas detector, 12-24 Vdc	ST / L / E3 / S3
S2154P8	JP8 gas detector, 12-24 Vdc	ST / L / E3 / S3
S2155ST	Styrene gas detector, 12-24 Vdc	ST / L / E3 / S3
S2155AV	Vinyl acetate gas detector, 12-24 Vdc	ST / L / E3 / S3
S2155AF	Formaldehyde gas detector, 12-24 Vdc	ST / L / E3 / S3
S2155CO	Carbon monoxide gas detector, 12-24Vdc	St / L / E3 / S3



Mechanical drawings

ATEX code ST / L / E3 /S3



ATEX code ST / L / E3 /S2

