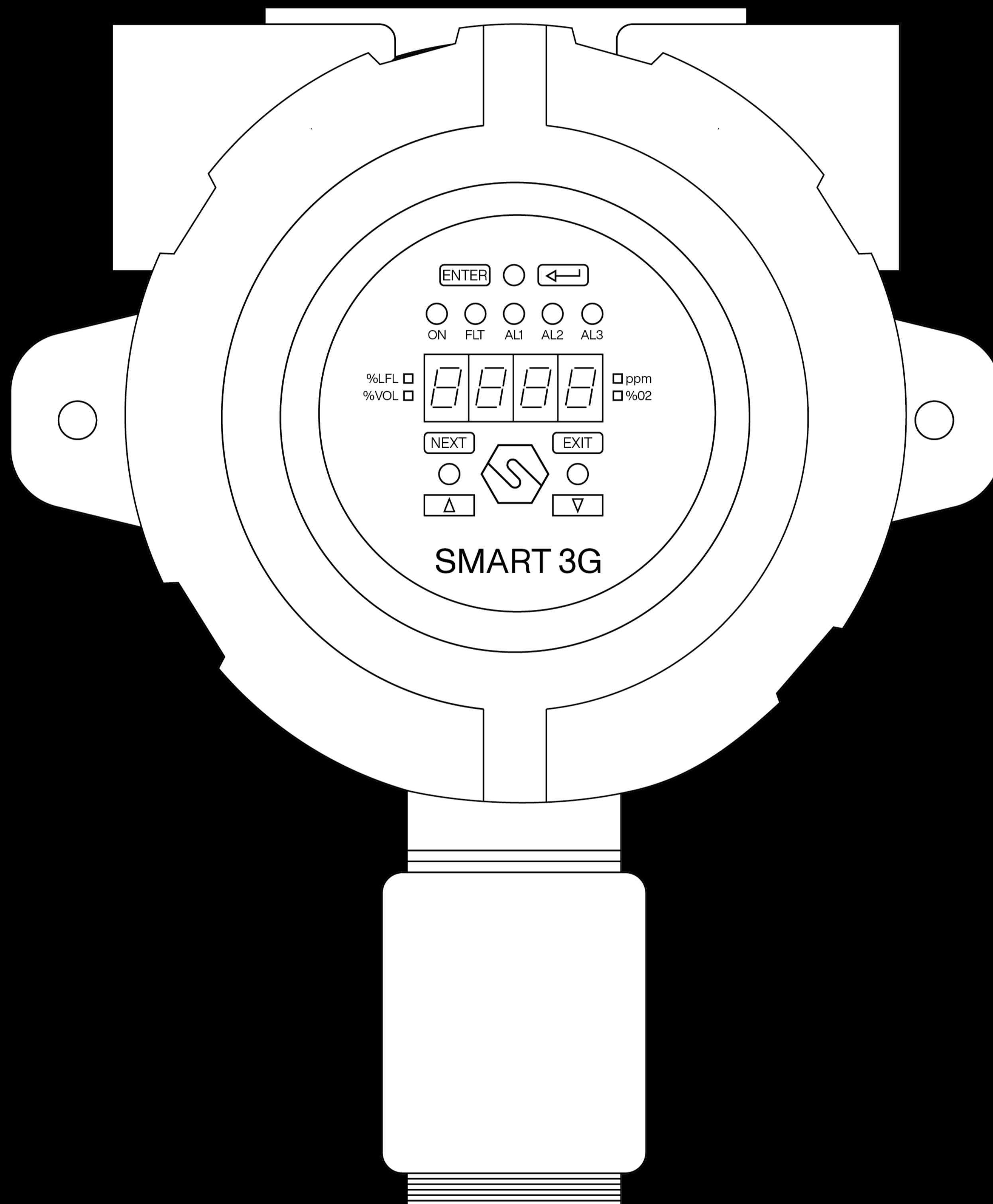


SMART3G-D2

With infrared sensor



Datasheet





The SMART3G-D2 gas detector is designed to meet industrial requirements; the enclosure is explosion proof and can be installed in ATEX Zone 1 and, when equipped with dust adapter, in Zone 21. The sensing element is placed in the stainless steel head with a 48 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 and three relays. Optionally, the SMART3G-D2 can be equipped with serial RS485 communication. The aluminium enclosure has dimensions 145 x 187 x 108 mm. The enclosure has 3 cable entries 3/4" NPT threaded. The SMART3G-D2 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 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:

Ex db IIC T5 Gb

Or, when equipped with dust adapter:

Ex db IIC T5 Gb
Ex tb IIIC T100°C Db
IP65

SMART3G-D2 is SIL2 hardware and SIL3 software; with a redundant system also the hardware is SIL3.

Sensor

| | |
|---------------------------|---|
| Application | Industrial area, ATEX Zone 1 and Zone 21 (when equipped with dust adapter, optional) |
| Sensing element | Infrared |
| Predicted sensor lifetime | >5 years |
| Gas detected | Flammable, refrigerant and CO ₂ |
| Fullscale | 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; 3 relay board; 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 / +60°C * |
| Operating humidity | 20 / 90% RH @40°C * |
| Operating pressure | 80 / 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 | 1900 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 | | ATEX code |
|--|--|-------------------|
| Flammable gas detectors 0-100% LFL, 12-24 Vdc | | |
| S2626ME | Methane (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602BU | Butane (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602PR | Propane (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602GP | LPG (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602AT | Acetone (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602BN | Butadiene (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602CE | Cyclohexane (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602DT | Dimethyl ether (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602EN | Ethane (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602AE | Ethyl acetate (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602ET | Ethyl alcohol (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602EP | Heptane (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602ES | Hexane (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602IB | Isobutane (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602IL | Isobutylene (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602IP | Isopropyl alcohol (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602PE | Pentane (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602PP | Propylene (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602VB | Petrol vapours (0-100%LFL) detector | ST / LW / E3 / S3 |
| S2602DE | R152a (0-100%LFL) detector | ST / LW / E3 / S3 |
| S4435R454B | R454B (0-100%LFL) detector | ST / LW / E3 / S3 |
| S3427R32 | R32 (0-100%LFL) detector | ST / LW / E3 / S3 |
| S3431R1234YF | R1234yf (0-100%LFL) detector | ST / LW / E3 / S3 |
| S3436R1234ZE | R1234ze (0-100%LFL) detector | ST / LW / E3 / S3 |
| Refrigerant gas detectors 0-2000 ppm, 12-24 Vdc | | |
| S3945R32 | R32 (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3163R134A | R134a (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3601SF6 | SF6 (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3661R125 | R125 (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3662R1234YF | R1234yf (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3949R1234ZE | R1234ze (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3663R404A | R404A (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3917R407A | R407A (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3664R407F | R407F (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3924R449A | R449A (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3665R507A | R507A (0-2000 ppm) detector | ST / LW / E3 / S3 |

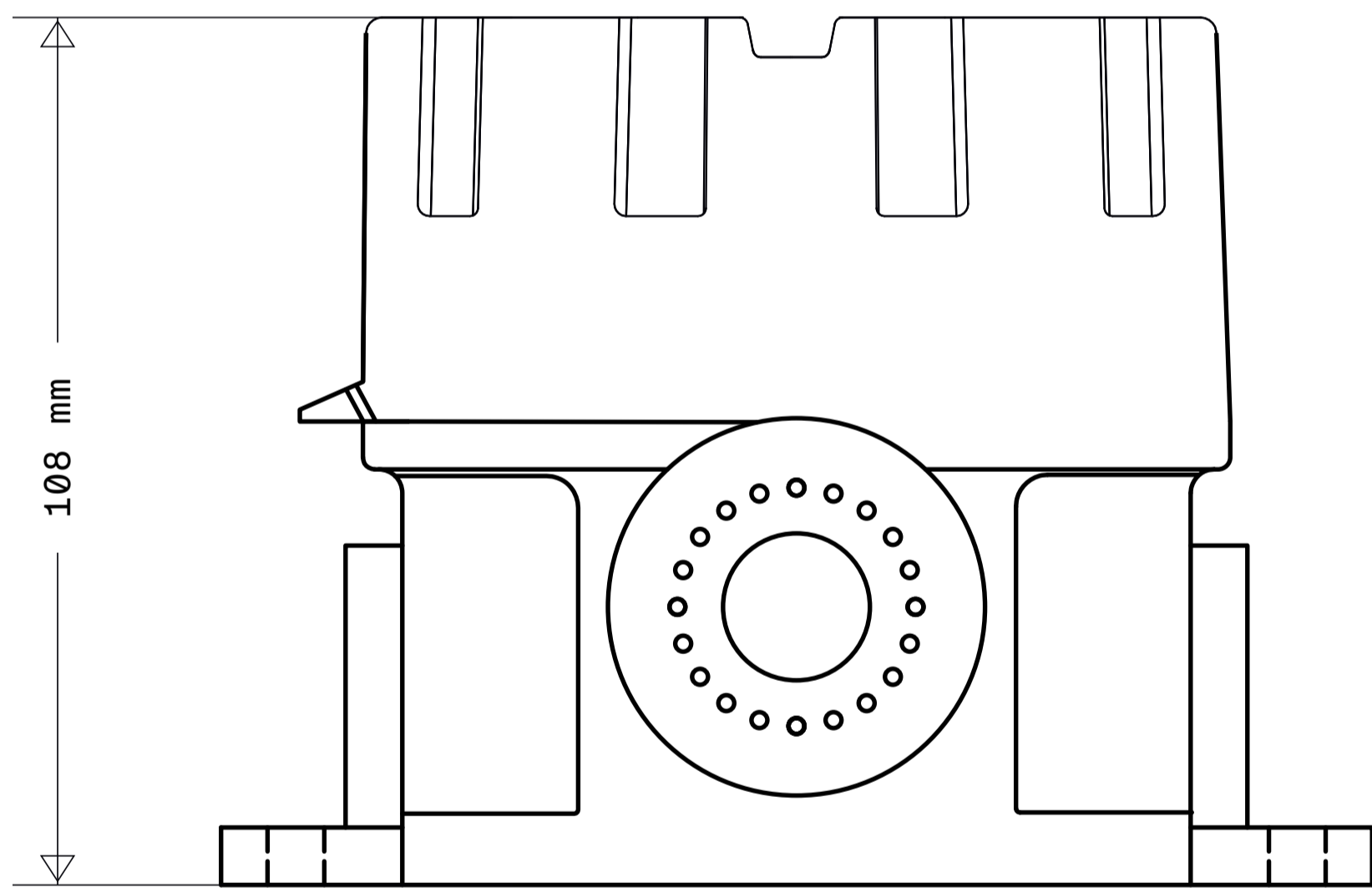


Product codes

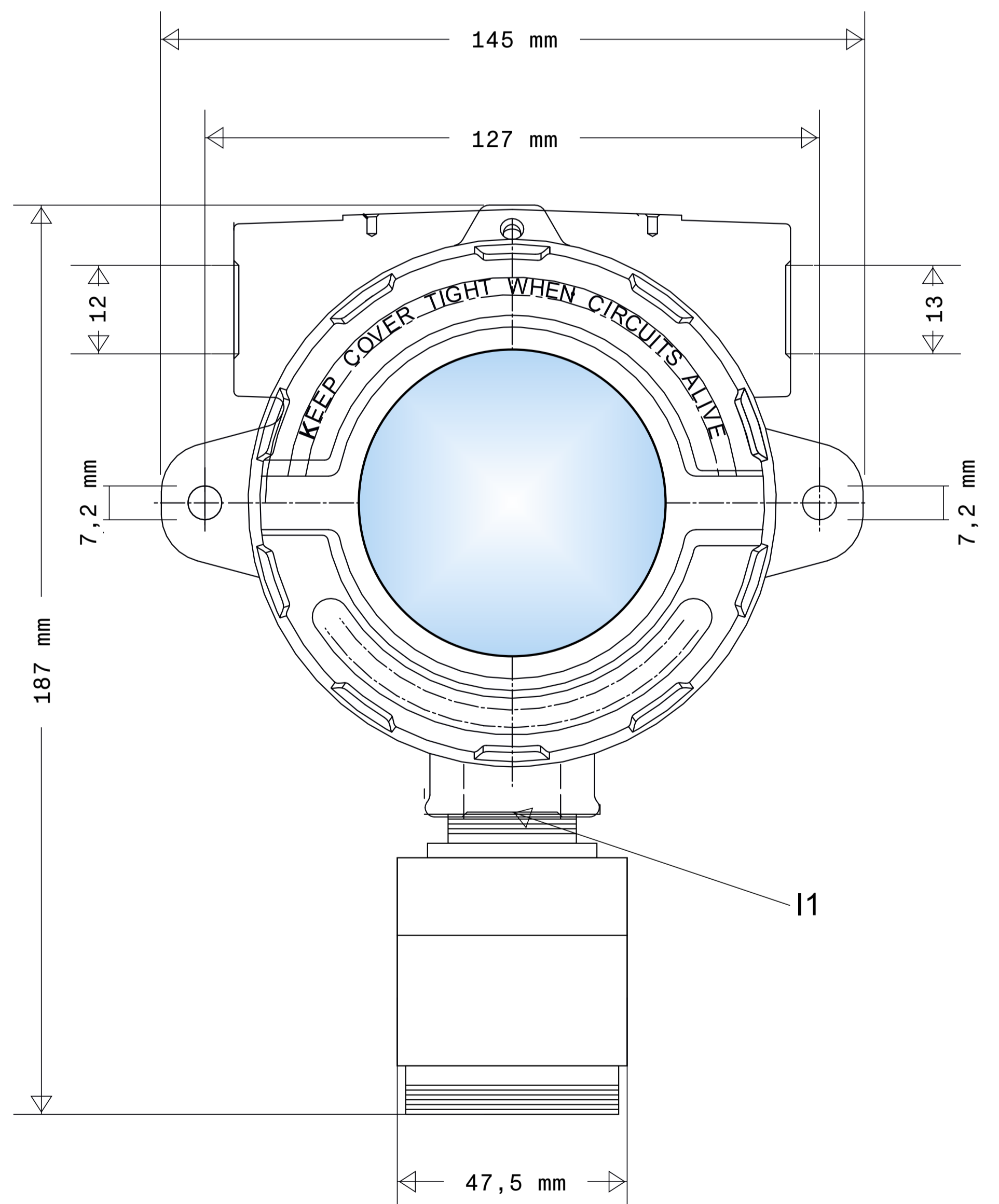
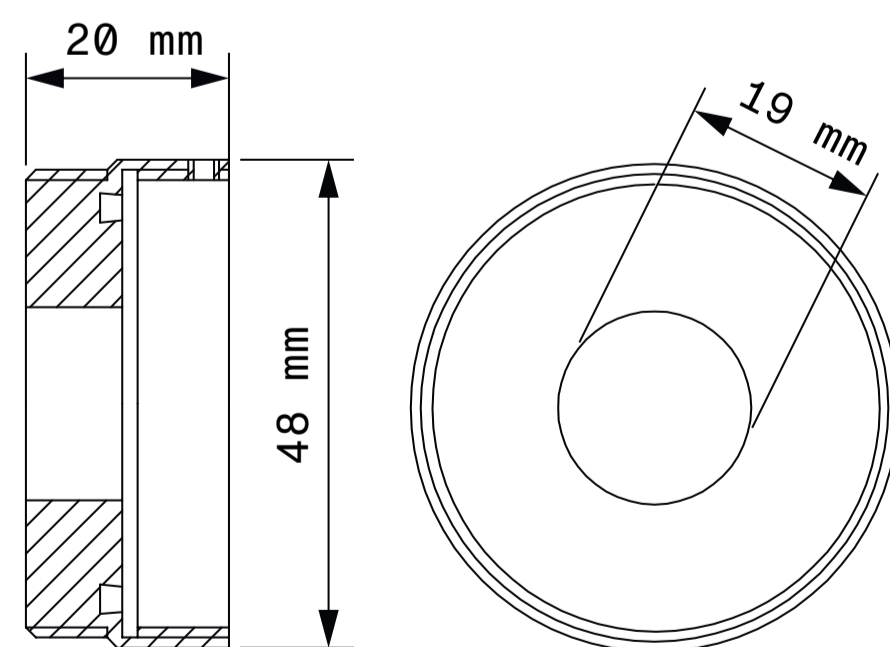
ATEX code

| | | |
|---|---------------------------------------|-------------------|
| S3673R410A | R410A (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3953R417A | R417A (0-2000 ppm) detector | ST / LW / E3 / S3 |
| S3957R448 | R448 (0-2000 ppm) detector | ST / LW / E3 / S3 |
| Carbon dioxide gas detectors, 12-24 Vdc | | |
| S2634CO2 | CO ₂ detector, 0-2% vol. | ST / LW / E3 / S3 |
| S2635CO2 | CO ₂ detector, 0-5% Vol. | ST / LW / E3 / S3 |
| S2449CO2 | CO ₂ detector, 0-30% Vol. | ST / LW / E3 / S3 |
| S2636CO2 | CO ₂ detector, 0-100% Vol. | ST / LW / E3 / S3 |

Mechanical drawings



STG/AD3
Dust adapter



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