

Sample gas probe GAS 222.30 Ex1

In many applications gas analysis is the key for safe and efficient control of process flows, environmental protection and quality assurance. In extractive gas analysis the location of the gas sampling point is crucial for the reproducibility and accuracy of the analysis results.

The specific filter capacity, corrosion resistance and functional equipment requirements for the probe arise from the composition of the sample gas.

However, operating costs are also an important criterion in the selection, as the sampling points are frequently located at hard to access points in the system. Effective particle filter backwashing options and low maintenance characterise the extensive GAS probe series.

Versions with Atex and IECEx approval

Unheated probe with shut-off valve and upstream filter







For dust loads up to 200 g/m³, non-condensable gases

This probe is designed for use in explosive areas.
Use in zone 1 and 21 and sampling from zone 0 and 20.



Technical Data

Gas Probe Technical Data

| | | |
|---|---|--|
| Ambient temperature without accessories: | -40 to 131 °F | |
| Ambient temperature with accessories: | Component | Ambient temperature range |
| | Compressed air valve: | -22 °F < T _{amb} < 131 °F |
| | Solenoid valve for pneumatic drive: | 14 °F < T _{amb} < 131 °F |
| | Pneumatic drive: | -4 °F < T _{amb} < 131 °F |
| | Limit switch: | -13 °F < T _{amb} < 131 °F |
| | Terminal box: | -4 °F < T _{amb} < 131 °F |
| Permissible gas inlet temperatures: | Outer zone temperature class | Permissible gas inlet temperature |
| | T2 | 275 °F |
| | T3 | 275 °F |
| | T4 | 266 °F |
| Medium temperature (blowback): | Component | Medium temperature range |
| | Compressed air valve: | 14 °F to 176 °F |
| | Solenoid valve for pneumatic drive: | 14 °F to 212 °F |
| Max. operating pressure: | 85 psia | |
| Max. flow rate: | 16.66 lpm | |
| Materials in contact with media | | |
| Flange: | Stainless steel 1.4571 | |
| Probe body: | Stainless steel 1.4571 | |
| Ball valve: | Stainless steel 1.4408/1.4462/PTFE | |
| Seal: | Stainless steel 1.4404/graphite/and see filter | |
| Probe marking, depending on the selected options and temperature class: | for zone 0/1: ATEX:  II 1G/2G Ex db ¹ eb mb ² IIC T4 Ga/Gb IECEX: Ex db ¹ eb mb ² IIC T4 Ga/Gb for zone 1: ATEX:  II 2G Ex db ¹ eb mb ² IIC T4 Gb IECEX: Ex db ¹ eb mb ² IIC T4 Gb for zone 0/21: ATEX:  II 1G/2D Ex db ¹ eb mb ² IIC T4 Ga Ex tb mb ² IIIC T130 °C Db IECEX: Ex db ¹ eb mb ² IIC T4 Ga Ex tb mb ² IIIC T130 °C Db for zone 20/1: ATEX:  II 1D/2G Ex ta IIIC T130 °C Da Ex db ¹ eb mb ² IIC T4 Gb IECEX: Ex ta IIIC T130 °C Da Ex db ¹ eb mb ² IIC T4 Gb for zone 20/21: ATEX:  II 1D/2D Ex ta/tb mb ² IIIC T130°C Da/Db IECEX: Ex ta/tb mb ² IIIC T130°C Da/Db for zone 21: ATEX:  II 2D Ex tb mb ² IIIC T130°C Db IECEX: Ex tb mb ² IIIC T130°C Db ¹ "db" only for GAS 222.11/30 versions with limit switch ² "mb" only for versions with solenoid valve | |
| Applied standards: | IEC 60079-0 (Ed. 6.0); IEC 60079-7 (Ed. 5.0); IEC 60079-26 (Ed. 3.0); EN 60079-0:2012+A11:2013; EN 60079-7:2015; EN 60079-26:2015 | |
| IECEX certificate number: | IECEX IBE 17.0024X | |
| ATEX certificate number: | IBExU17ATEX1088X | |

Ordering instructions

The item number is a code for the configuration of your unit. Please use the following model key:

| | | | | | | | | | | | | | | | | | | | |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|----------------------|----------------|----------------|---|
| 4622230 | X | X | X | X | X | 4 | 0 | 0 | X | X | X | X | X | X | Product Characteristics | | | | |
| | | | | | | | | | | | | | | | Terminal box | | | | |
| | 0 | | | | | | | | | | | | | | No | | | | |
| | 1 | | | | | | | | | | | | | | Yes | | | | |
| | | | | | | | | | | | | | | | Flange | | | | |
| | 0 | 1 | | | | | | | | | | | | | Flange DN65 PN6 | | | | |
| | 0 | 2 | | | | | | | | | | | | | Flange DN3"-150 | | | | |
| | x | x | | | | | | | | | | | | | Other | | | | |
| | | | | | | | | | | | | | | | Hazardous area | | | | |
| | | | | | | | | | | | | | | | Outside | | | | |
| | 4 | | | | | | | | | | | | | | | Zone 1 (Atex/IECEX) | | | |
| | 7 | | | | | | | | | | | | | | | Zone 21 (Atex/IECEX) | | | |
| | 9 | | | | | | | | | | | | | | | none | | | |
| | | | | | | | | | | | | | | | Inside | | | | |
| | 3 | | | | | | | | | | | | | | | Zone 0 (Atex/IECEX) | | | |
| | 4 | | | | | | | | | | | | | | | Zone 1 (Atex/IECEX) | | | |
| | 6 | | | | | | | | | | | | | | | Zone 20 (Atex/IECEX) | | | |
| | 7 | | | | | | | | | | | | | | | Zone 21 (Atex/IECEX) | | | |
| | 9 | | | | | | | | | | | | | | | none | | | |
| | | | | | | | | | | | | | | | Temperature class (inside/outside) | | | | |
| | | | | | | | | | | | | | | | Ga/Gb or Gb/Gb | Ga/Db or Gb/Db | Da/Gb or Db/Gb | Da/Db or Db/Db | |
| | 4 | | | | | | | | | | | | | | | T4/T4 | T4/T130 °C | T130 °C/T4 | T130 °C/T130 °C |
| | | | | | | | | | | | | | | | Calibration gas port | | | | |
| | | | | | | | | | | | | | | | | 0 | | | No |
| | | | | | | | | | | | | | | | | 1 | | | 6 mm |
| | | | | | | | | | | | | | | | | 2 | | | 6 mm with check valve |
| | | | | | | | | | | | | | | | | 3 | | | 1/4" |
| | | | | | | | | | | | | | | | | 4 | | | 1/4" with check valve |
| | | | | | | | | | | | | | | | Pressure vessel * | | | | |
| | | | | | | | | | | | | | | | | 0 | | | No |
| | | | | | | | | | | | | | | | | 1 | | | Yes |
| | | | | | | | | | | | | | | | Purge valve * | | | | |
| | | | | | | | | | | | | | | | | 0 | | | Ball valve |
| | | | | | | | | | | | | | | | | 1 | | | Solenoid valve 110 V (marked with "mb") |
| | | | | | | | | | | | | | | | | 2 | | | Solenoid valve 230 V (marked with "mb") |
| | | | | | | | | | | | | | | | | 3 | | | Solenoid valve 24 V (marked with "mb") |
| | | | | | | | | | | | | | | | | 9 | | | none |
| | | | | | | | | | | | | | | | Pneumatic actuator for internal ball valve | | | | |
| | | | | | | | | | | | | | | | | 0 | | | No |
| | | | | | | | | | | | | | | | | 1 | | | Monostable pressure-free opened |
| | | | | | | | | | | | | | | | | 2 | | | Monostable pressure-free closed |
| | | | | | | | | | | | | | | | Limit switch for pneumatic actuator | | | | |
| | | | | | | | | | | | | | | | | 0 | | | No |
| | | | | | | | | | | | | | | | | 1 | | | Yes (marked with "db" or "ta" or "tb") |
| | | | | | | | | | | | | | | | Solenoid valve for pneumatic actuator | | | | |
| | | | | | | | | | | | | | | | | 0 | | | No |
| | | | | | | | | | | | | | | | | 1 | | | 110 V (marked with "mb") |
| | | | | | | | | | | | | | | | | 2 | | | 230 V (marked with "mb") |
| | | | | | | | | | | | | | | | | 3 | | | 24 V (marked with "mb") |

* Blowback of explosive atmosphere prohibited.

Options

The base unit becomes functional by adding accessories suitable for the application. Please refer to accessory data sheet no. 461099 for information.

Please also refer to data sheet no. 461000 "GAS 222 Gas Probes" for a general description.

Flow chart