

Sample gas probe GAS 222.21

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.

Heated probe with shut-off valve, upstream and/or downstream filter and weather hood

The downstream filter can easily be removed by turning the handle 90°

The probe body and the area around the screw connection for the heated sample gas line are completely insulated

Electronic temperature controller up to 200 °C with low/high temperature alarm and display

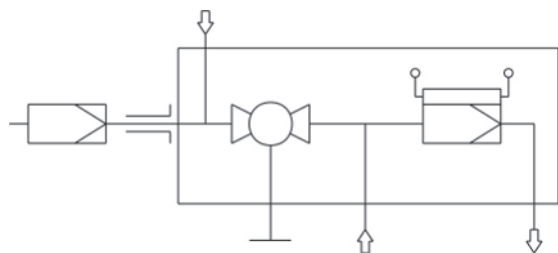
For dust loads up to 2 g/m³,
for upstream filters 10 g/m³ and more

This probe is not permitted for use in Ex areas

Optional coating of parts in contact with media using SilcoNert® 2000



Flow chart



Technical Data

Gas Probe Technical Data

| | | |
|--|--|-------------------------------------|
| Probe operating temperature: | max. 200 °C | |
| Ambient temperature without accessories: | -20 to +70 °C | |
| Ambient temperature with accessories: | Component | Ambient temperature range |
| | Compressed air valve: | -10 °C < T _{amb} < +55 °C |
| | Pneumatic drive: | -20 °C < T _{amb} < +80 °C |
| | Limit switch: | -20 °C < T _{amb} < +100 °C |
| | Solenoid valve for pneumatic drive: | -10 °C < T _{amb} < +55 °C |
| Medium temperature (blowback): | Component | Medium temperature range |
| | Compressed air valve: | -10 °C to +80 °C |
| | Solenoid valve for pneumatic drive: | -10 °C to +100 °C |
| Regulator setting range: | +50 to +200 °C | |
| Low/high temperature alarm: | Alarm adjustable ±5.....30 K from setpoint, factory preset to 15 K, max. switching current 1 A | |
| Electrical data: | 230 V, 2.0 A, 50/60 Hz 115 V, 3.8 A, 50/60 Hz | |
| Protection class: | IP54 | |
| Max. operating pressure: | 6 bar | |
| 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 Optional coating with SilcoNert® 2000 * | |

*The SilcoNert® 2000 coating forms a layer of hydrogenated, amorphous silicon on the surfaces of the measuring gas probe that are in contact with media. It is applied by chemical vapour deposition (CVD), which creates a uniformly thin layer on the surface. SilcoNert® 2000 is temperature-resistant up to 400 °C, chemically inert and hydrophobic. The coating is resistant to many chemically corrosive liquids. If you are unsure about the suitability for specific gas matrices, please contact Bühler Technologies GmbH.

Ordering Instructions

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

| 4622221 | X | 9 | 9 | 0 | X | X | X | X | X | X | X | X | X | X | X | SN | Product characteristic |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| | | | | | | | | | | | | | | | | | Flange |
| | | | | | | | | | | | | | | | | | DIN DN65 PN6 |
| | | | | | | | | | | | | | | | | | ANSI 3"-150 lbs - without CSA C & US approval |
| | | | | | | | | | | | | | | | | | Probe voltage |
| | | | | | | | | | | | | | | | | | 115 V |
| | | | | | | | | | | | | | | | | | 230 V |
| | | | | | | | | | | | | | | | | | Calibrating gas connection |
| | | | | | | | | | | | | | | | | | No calibrating gas connection |
| | | | | | | | | | | | | | | | | | 6 mm |
| | | | | | | | | | | | | | | | | | 6 mm + check valve |
| | | | | | | | | | | | | | | | | | 1/4" |
| | | | | | | | | | | | | | | | | | 1/4" + check valve |
| | | | | | | | | | | | | | | | | | Connection of heated extension |
| | | | | | | | | | | | | | | | | | No |
| | | | | | | | | | | | | | | | | | Yes |
| | | | | | | | | | | | | | | | | | Built-in temperature controller for heated extension ¹⁾ |
| | | | | | | | | | | | | | | | | | No |
| | | | | | | | | | | | | | | | | | Yes |
| | | | | | | | | | | | | | | | | | Blowback with air reservoir ²⁾ |
| | | | | | | | | | | | | | | | | | Air reservoir heating |
| | | | | | | | | | | | | | | | | | Yes |
| | | | | | | | | | | | | | | | | | No |
| | | | | | | | | | | | | | | | | | Built-in blowback control ¹⁾ |
| | | | | | | | | | | | | | | | | | Internal controller |
| | | | | | | | | | | | | | | | | | No |
| | | | | | | | | | | | | | | | | | Compressed air valve / valve voltage information |
| | | | | | | | | | | | | | | | | | Manual |
| | | | | | | | | | | | | | | | | | 115 V |
| | | | | | | | | | | | | | | | | | 230 V |
| | | | | | | | | | | | | | | | | | 24 V |
| | | | | | | | | | | | | | | | | | None (if no blowback requested) |
| | | | | | | | | | | | | | | | | | Pneumatic drive for ball valve |
| | | | | | | | | | | | | | | | | | Monostable pressure-free open |
| | | | | | | | | | | | | | | | | | Monostable pressure-free closed |
| | | | | | | | | | | | | | | | | | Bi-stable |
| | | | | | | | | | | | | | | | | | None |
| | | | | | | | | | | | | | | | | | Limit switch for pneumatic drive |
| | | | | | | | | | | | | | | | | | Yes |
| | | | | | | | | | | | | | | | | | No |
| | | | | | | | | | | | | | | | | | Control valve for pneumatic drive |
| | | | | | | | | | | | | | | | | | 3/2-way valve |
| | | | | | | | | | | | | | | | | | 5/2-way valve ³⁾ |
| | | | | | | | | | | | | | | | | | No control valve |
| | | | | | | | | | | | | | | | | | Glass coating of parts in contact with media |
| | | | | | | | | | | | | | | | | | SN SilcoNert® 2000 ⁴⁾ |

¹⁾ The electronics can either be equipped with temperature controller for heated extension or blowback control.

²⁾ For flammable sample gas, always use inert gas for blowback. Probe blowback prohibited when using explosive gases!

³⁾ Only possible with ball valve in combination with bistable pneumatic drive.

⁴⁾ Extends delivery time by approx. 6 weeks.

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.

