Sample gas probe GAS 222.11 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/or upstream filter
- The filter element can easily be removed by turning the handle 90°
- For dust loads up to 2 g/m³, non-condensable gases. Combined with upstream filter up to 10 g/m³ and higher
- This probe is designed for use in explosive areas. Use in zone 1 and 21 and sampling from zone 0 and 20.

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Technical Data

Gas Probe Technical Data

Ambient temperature without accessories:	-40 to +55 °C	
Ambient temperature with accessories:	**Component**	**Ambient temperature range**
	Compressed air valve:	-30 °C < T_{amb} < +55 °C
	Solenoid valve for pneumatic drive:	-10 °C < T_{amb} < +55 °C
	Pneumatic drive:	-20 °C < T_{amb} < +55 °C
	Limit switch:	-25 °C < T_{amb} < +55 °C
	Terminal box:	-20 °C < T_{amb} < +55 °C
Permissible gas inlet temperatures:	**Outer zone temperature class**	**Permissible gas inlet temperature**
	T2	135 °C
	T3	135 °C
	T4	130 °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
Max. operating pressure:	6 bar	
Max. flow rate:	1000 L/h	
Materials in contact with media Flange: Probe body: Ball valve: Seal:	 Stainless steel 1.4571 Stainless steel 1.4571 Stainless steel 1.4408/1.4462/PTFE Stainless steel 1.4404/graphite/and see filter	
Probe marking, depending on the selected options and temperature class:	**for zone 0/1:** ATEX: Ⓔx 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: Ⓔx 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: Ⓔx 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: Ⓔx 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: Ⓔx 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: Ⓔx 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:

4622211	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 [1]			
									3						1/4"			
									4						1/4" with check valve [1]			
															Pressure vessel [2]			
										0					No			
										1					Yes			
															Purge valve [2]			
											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")			

[1] The check valve option is possible in combination with “inner zone” 1/2 (Atex/IECEx) or 21/22 (Atex).

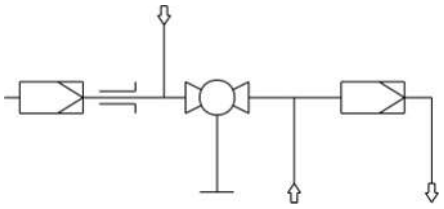
[2] Blowback of explosive atmosphere prohibited.

Options

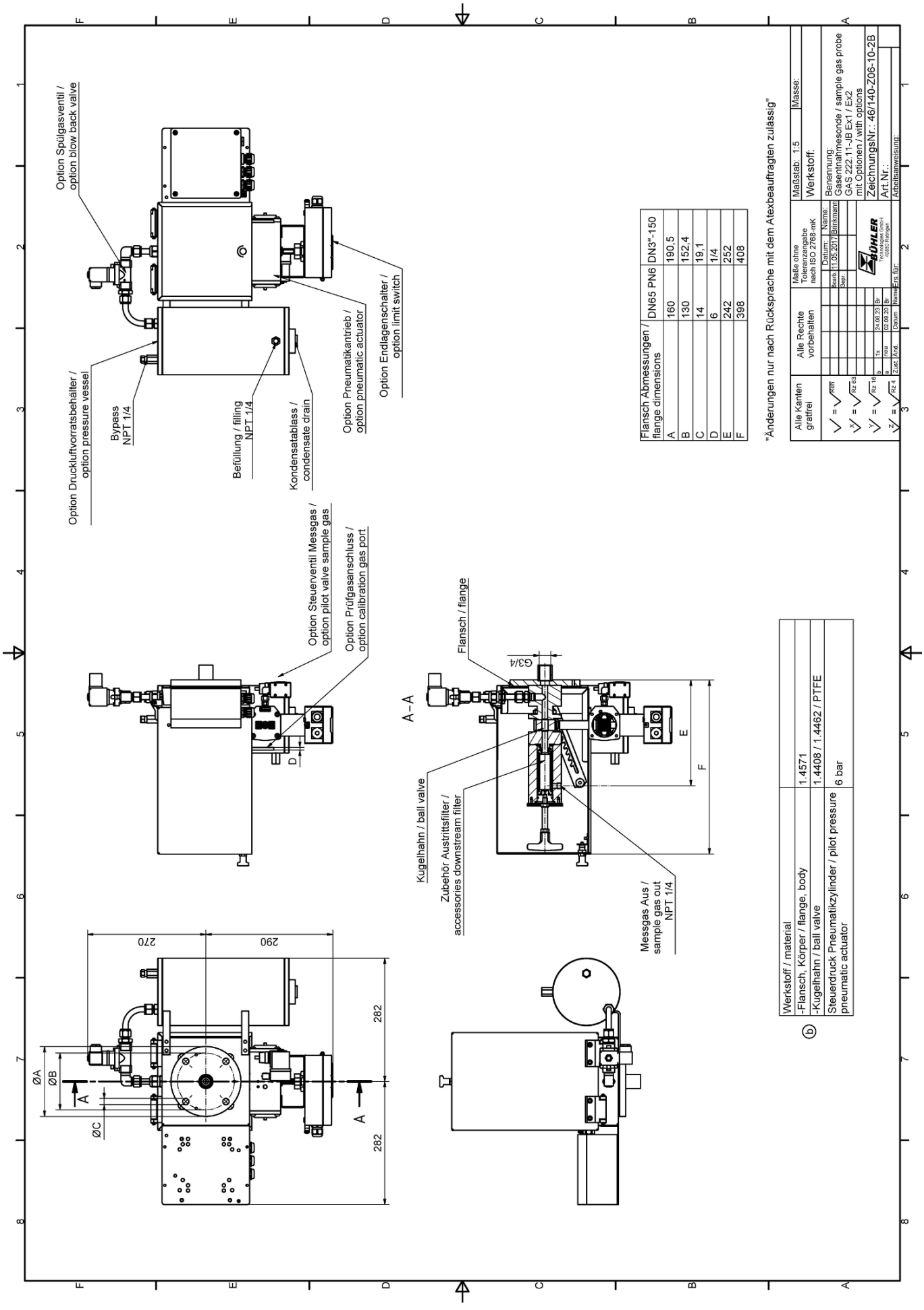
The base unit becomes functional by adding accessories suitable for the application. Please refer to accessory data sheet no. 461099 for information.

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

Flow chart



Dimensions


Option Spülgasventil / option blow back valve
Option Druckluftvorratsbehälter / option pressure vessel
Bypass NPT 1/4
Befüllung / filling NPT 1/4
Kondensatablass / condensate drain
Option Pneumatikantrieb / option pneumatic actuator
Option Endlagenschalter / option limit switch
Option Steuerventil Messgas / option pilot valve sample gas
Option Prüfgasanschluss / option calibration gas port
D
A–A
Flansch / flange
G3/4
E
F
Kugelhahn / ball valve
Zubehör Austrittsfilter / accessories downstream filter
Messgas Aus / sample gas out NPT 1/4
270
290
282
282
ØA
ØB
ØC
A
A
Flansch Abmessungen / flange dimensions
DN65 PN6
DN3"-150
A 160 190,5
B 130 152,4
C 14 19,1
D 6 1/4
E 242 252
F 398 408
"Änderungen nur nach Rücksprache mit dem Atexbeauftragten zulässig"
Alle Kanten gratfrei
Alle Rechte vorbehalten
Maße ohne Toleranzangabe nach ISO 2768-mK
Maßstab: 1:5
Masse:
Werkstoff:
Benennung: Gasentnahmesonde / sample gas probe GAS 222.11-JB Ex1 / Ex2 mit Optionen / with options
ZeichnungsNr.: 46/140-Z06-10-2B
Art.Nr.:
Arbeitsanweisung:
Bearb. 11.05.2017 Blinkmann
Datum
Name
Ers. für:
Zust. Änd.
a neu 02.09.20 Br
b 1:x 24.08.23 Br
Werkstoff / material
-Flansch, Körper / flange, body 1.4571
-Kugelhahn / ball valve 1.4408 / 1.4462 / PTFE
Steuerdruck Pneumatikzylinder / pilot pressure pneumatic actuator 6 bar