[1] EU-TYPE EXAMINATION CERTIFICATE - Translation

[2] Equipment or protective systems
intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU17ATEX1088 X** | Issue 2

[4] Product: **Sample Gas Probes**
Type: GAS 222.xx(-x) Ex1

[5] Manufacturer: Bühler Technologies GmbH

[6] Address: Harkortstr. 29
40880 Ratingen
GERMANY

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, notified body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-22-3-0205.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN IEC 60079-0:2018, EN 60079-1:2014, EN IEC 60079-7:2015/A1:2018, EN 60079-18:2015/A1:2017, EN 60079-26:2015, EN 60079-30-1:2017 und EN 60079-31:2014
except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

GAS 222.20/21/31/35:

The explosion protection marking for use in the boundary wall between categories 1G and 2G is:

Ex II 1G/2G Ex db eb mb IIC T5/T6...T1/T2 Ga/Gb

The explosion protection marking for use in category 2G is:

Ex II 2G Ex db eb mb IIC T6...T2 Gb

The explosion protection marking for use in the boundary wall between categories 1D und 2D is:

Ex II 1D/2D Ex ta/tb mb IIIC T120 °C/T80 °C...T300 °C/T226 °C Da/Db

The explosion protection marking for use in category 2D is:

Ex II 2D Ex tb mb IIIC T80 °C...T226 °C Db

The explosion protection marking for use in the boundary wall between categories 1G and 2D is:

Ⓔx II 1G/2D
Ex db eb mb IIC T5 ...T1 Ga
Ex tb mb IIIC T80 °C...T226 °C Db

The explosion protection marking for use in the boundary wall between categories 1D and 2G is:

Ⓔx II 1D/2G
Ex ta IIIC T120 °C...T300 °C Da
Ex db eb mb IIC T6 ...T2 Gb

GAS 222.10/11/30/35-U:

The explosion protection marking for use in the boundary wall between categories 1G and 2G is:

Ⓔx II 1G/2G Ex db eb mb IIC T4 Ga/Gb

The explosion protection marking for use in category 2G is:

Ⓔx II 2G Ex db eb mb IIC T4 Gb

The explosion protection marking for use in the boundary wall between categories 1D und 2D is:

Ⓔx II 1D/2D Ex ta/tb mb IIIC T130°C Da/Db

The explosion protection marking for use in category 2D is:

Ⓔx II 2D Ex tb mb IIIC T130 °C Db

The explosion protection marking for use in the boundary wall between categories 1D und 2D is:

Ⓔx II 1G/2D
Ex db eb mb IIC T4 Ga
Ex tb mb IIIC T130 °C Db

The explosion protection marking for use in the boundary wall between categories 1D and 2G is:

Ⓔx II 1D/2G
Ex ta IIIC T130 °C Da
Ex db eb mb IIC T4 Gb

These are the maximal markings and depends on the used configuration.

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By order

Dr.-Ing. P. Cimalla

- Seal -
(notified body number 0637)

Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Freiberg, 2023-02-13

[13] **Schedule**

[14] **Certificate number IBExU17ATEX1088 X** | Issue 2

[15] **Description of product**
A sample gas is transported through the sample gas probe to a gas analyzer via an external sample gas pump.

Unheated Types
Unheated sample gas probes (type 10, 11, 30, 35-U) are designed for use in category 2G or 2D and for sampling from category 1G or 1D. The sample gas passes through a particle filter which is located inside the probe (type 10, 11) or outside the probe in the process (type 11, 30, 35-U). With version 11 and 30 it is possible to separate the inside of the probe from the process by means of a ball valve, e.g. to change the filter.

Heated Types
Heated sample probes (type 20, 21, 31, 35) are designed for use in category 2G or 2D and for sampling from category 1G or 1D. The sample gas passes through a particle filter which is located inside the probe (type 20, 21) or outside the probe in the process (type 21, 31, 35). With the versions 21 and 31, it is possible to separate the inside of the probe from the process by means of a ball valve, e.g. to change the filter (type 21). For category 1G and 1D applications, the temperature class / maximum surface temperature inside deviates from the outside, see special conditions.

Heated and unheated probes are suitable for an ambient temperature of -40 to +60 °C. They are always equipped with approved electrical components (e.g. solenoid valves, terminal box). The type code and the implementation in the order configurator exclude the configuration of unheated probes without electrical components as type-tested devices.

The ambient temperature range, the temperature classes and maximum surface temperatures depend solely on the selection of the components used.

Ambient temperature range:	-40 °C to +60 °C (maximum range, depending on components used)
Rated voltage:	115 V AC and 230 V AC
Rated frequency:	50/60 Hz

4	6	2	2	2										0						

Code	**sample probe basis unit**			
	unheated			
1 0	GAS 222.10			
1 1	GAS 222.11			
3 0	GAS 222.30			
3 5	GAS 222.35-U			
	heated			
2 0	GAS 222.20			
2 1	GAS 222.21			
3 1	GAS 222.31			
3 5	GAS 222.35			
	junction box			
0	no (only GAS 222.10/11/30/35-U)			
1	yes			
	flange			
0 1	flange DN65 PN6			
0 2	flange DN3"-150			
x x	others			
	hazardous area			
	outside			
4	zone 1			
7	zone 21			
	inside			
3	zone 0			
4	zone 1			
6	zone 20			
7	zone 21			
9	none			
	temperature class inside / outside (GAS 222.20/21/31/35)			
	Ga/Gb	**Ga/Db**	**Da/Gb**	**Da/Db**
2	T1 /T2	T1/T226°C	T300°C/T2	T300°C/T226°C
4	T3/T4	T3/T130°C	T175°C/T4	T175°C/T130°C
6	T5/T6	T5/T80°C	T120°C/T6	T120°C/T80°C
	temperature class inside / outside (GAS 222.20/21/31/35)			
	Gb/Gb	**Gb/Db**	**Db/Gb**	**Db/Db**
2	T2/T2	T2/T226°C	T226°C/T2	T226°C/T226°C
4	T4/T4	T4/T130°C	T130°C/T4	T130°C/T130°C
6	T6/T6	T6/T80°C	T80°C/T6	T80°C/T80°C
	temperature class inside / outside (GAS 222.10/11/30/35-U)			
	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
	power supply sample probe			
0	none (only for GAS 222.10/11/30/35-U)			
1	115 V (only for GAS 222.20/21/31/35)			
2	230 V (only for GAS 222.20/21/31/35)			
	calibration gas port			
0	no			
1	6 mm			
2	6 mm + check valve			
3	1/4			
4	1/4" + check valve			
	pressure vessel			
0	no			
1	yes			
	purge valve			
0	ball valve			
1	solenoid valve 110 V (marked with „mb") (only T2-T4 oder T130°C)			
2	solenoid valve 230 V (marked with „mb") (only T2-T4 oder T130°C)			
3	solenoid valve 24 V (marked with „mb") (only T2-T4 oder T130°C)			
9	without			
	pneumatic actuator for internal ball valve			
0	no			
1	mono stable depressurized open (only for GAS 222.11/30/21/31)			
2	mono stable depressurized closed (only forGAS 222.11/30/21/31)			
	limit switch for pneumatic actuator			
0	no			
1	yes (only for GAS 222.11/30/21/31) (marked with „db" or „ta" or „tb")			
	solenoid valve for pneumatic actuator			
0	no			
1	110V (only for GAS 222.11/30/21/31) (marked with "mb") (only T2-T4 or T130°C)			
2	230V (only for GAS 222.11/30/21/31) (marked with "mb") (only T2-T4 or T130°C)			
3	24V (only for GAS 222.11/30/21/31) (marked with "mb") (only T2-T4 or T130°C)			

Variation compared to issue 1 of this certificate:

- The use of alternative trace heating devices including new end seals has been assessed.
- Conforming with current standard EN 60079-18:2015/A1:2017

[16] **Test report**
The test results are recorded in the confidential test report IB-22-3-0205 of 2023-01-17.
The test documents are part of the test report and they are listed there.

Summary of the test results
The sample gas probe type GAS 222.xx(-x) Ex1 meets the requirements of explosion protection for equipment of Group II, Category 2G and 1G/2G in type of protection increased safety in combination with flameproof enclosures and encapsulation as well as Category 2D and 1D/2D in type of protection protection by enclosure in combination with encapsulation as well as for the combinations 1D/2G and 1G/2D.

[17] **Specific conditions of use**

- Strain relief for the cable connection must be installed.
- The cable must be secured against twisting and loosening.
- For heated sample gas probes, the temperature class / maximum surface temperature inside (category 1) deviates from that outside (category 2) and has to be observed accordingly.
- The maximum permitted ambient temperature range is -40 °C up to +60 °C. It depends on the components used and can be further restricted by these components. Additional information is mentioned in the instructions.

[18] **Essential health and safety requirements**
In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:
None

[19] **Drawings and Documents**
The documents are listed in the test report.

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By order

Dr.-Ing. P. Cimalla

Freiberg, 2023-02-13

IBExU Institut für Sicherheitstechnik GmbH

An-Institut der TU Bergakademie Freiberg

[1] EU-TYPE EXAMINATION CERTIFICATE - Translation

[2] Equipment or protective systems
intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU17ATEX1088 X** | Issue 0

[4] Product: **Sample Gas Probes**
Type: GAS 222.xx Ex1

[5] Manufacturer: Bühler Technologies GmbH

[6] Address: Harkortstr. 29
40880 Ratingen
GERMANY

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, notified body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-16-3-150.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN 60079-0:2012 + A11:2013 EN 60079-7:2015 EN 60079-26:2015
except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

EPL Ga/Gb: **Ⓔx II 1G/2G Ex db eb mb IIC T5/T6...T1/T2 Ga/Gb**
EPL Gb: **Ⓔx II 2G Ex db eb mb IIC T6...T2 Gb**

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By order

Dipl.-Ing. [FH] A. Henker

- Seal -
(notified body number 0637)

Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Freiberg, 2018-11-15

[13] **Schedule**

[14] **Certificate number IBExU17ATEX1088 X** | Issue 0

[15] **Description of product**

The sample gas probes type GAS 222.xx Ex 1 are to be operated in a zone 1 and can extract from zone 0. A sample gas is transported through the gas sampling probe to an external sample gas pump and then transported to a gas analyzer. The sample gas passes through a particle filter inside the probe (type 20, 21) or outside the probe (in the process, type 21, 31, 35). With the ball valve for example of type 21 and 31 it is possible to separate the probe interior from the process, in order to change the filter (type 21).

All probes can be heated by self-regulating heating bands from Pentair (depending on the version to T = 80 - 100°C). Standard heating cable type is the QTVR, there are also variants with the heating cable BTV, XTV and KTV.

The heating tape is wrapped around the probe's inner stainless steel body and is therefore not directly accessible. The internal stainless steel body of Type 20 is covered by an epoxy thermal insulation. The probes type 21,31 and 35 have a combination of stainless steel sheath and insulation. Furthermore, all probes are surrounded by a protective cover made of sheet steel, which can be opened for maintenance purposes, and are thus protected against external influences.

Versions 20, 21, 31 and 35 can be operated with a backwash mechanism. Compressed air (or inert gas) from a reservoir (pmax=10 bar) is immediately let into the probe to remove particles from the filter (in the process). Flammable gases may only be flushed back with inert gas (e. g. nitrogen). Backwashing is not permitted for explosive gas mixtures.
The probes are suitable for an ambient temperature of -40 °C to +60 °C. Depending on the accessories selected, this temperature range may be restricted.

Ambient temperature range:	-40 °C to +60 °C
Rated voltage:	115 V AC and 230 V AC
Rated frequency:	50/60 Hz

Item number IECEx GAS 222 Ex1

4	6	2	2	2			1						0						

		Sample probe basis unit
2	0	GAS 222.20
2	1	GAS 222.21
3	1	GAS 222.31
3	5	GAS 222.35
		Flange
0	1	Flange DN65 PN6
0	2	Flange DN3"-150
x	x	others
		Hazardous area
		outside
4		1
5		2
9		none
		inside
3		0
4		1
5		2
9		none
		Temperature class
2		T2 (T1/T2 for EPL Ga/Gb)
3		T3 (T2/T3 for EPL Ga/Gb)
4		T4 (T3/T4 for EPL Ga/Gb)
5		T5 (T4/T5 for EPL Ga/Gb)
6		T6 (T5/T6 for EPL Ga/Gb)
		Power supply sample probe
1		115V
2		230V
		Calibration gas port
0		No
1		6mm
2		6mm + check valve
3		1/4
4		1/4 + check valve
		Capacitive vessel
0		No
1		Yes (not for gas zone inside)
		Valve for pressurized air
0		Ball valve
1		solenoid valve 115V (marked with "mb") (only T2-T4)
2		solenoid valve 230V (marked with "mb") (only T2-T4)
3		solenoid valve 24V (marked with "mb") (only T2-T4)
9		without
		Pneumatic actuator for internal ball valve
0		No
1		Mono stable depressurized open (only for GAS 222.21/31)
2		Mono stable depressurized closed (only for GAS 222.21/31)
		Limit switch for pneumatic actuator
0		No
1		Yes (marked with "db") (only for GAS 222.21/31)
		Solenoid valve for pneumatic actuator
0		No
1		Yes (marked with "mb") (only for GAS 222.21/31) (only T2-T4)

[16] **Test report**

The test results are recorded in the confidential test report IB-16-3-150 of 2018-11-06.

The test documents are part of the test report and they are listed there.

Summary of the test results

The Sample Gas Probes type GAS 222.xx Ex1 fulfils the requirements of explosion protection for devices of group II, category 2G as well as 1G/2G in type of protection increased safety.

[17] **Specific conditions of use**

1. *Strain relief for the cable connection must be installing.*
2. *The cable must be secured against twisting and loosening.*
3. *When extracting from zone 0, the higher temperature class inside must be considered.*
4. *The ambient temperature range depends on the components used. For more information, refer to the manual.*

[18] **Essential health and safety requirements**
In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report: None

[19] **Drawings and Documents**
The documents are listed in the test report.

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By order

Dipl.-Ing. [FH] A. Henker

Freiberg, 2018-11-15

[1] EU-TYPE EXAMINATION CERTIFICATE - Translation

[2] Equipment or protective systems
intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU17ATEX1088 X** | Issue 1

[4] Product: **Sample Gas Probes**
Type: GAS 222.xx(-x) Ex1

[5] Manufacturer: Bühler Technologies GmbH

[6] Address: Harkortstr. 29
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GERMANY

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, notified body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-19-3-0059.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-7:2015/A1:2018 EN 60079-18:2015
EN 60079-26:2015 EN 60079-31:2014
except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

GAS 222.20/21/31/35:

The explosion protection marking for use in the seperation wall between categories 1G and 2G is:

II 1G/2G Ex db eb mb IIC T5/T6...T1/T2 Ga/Gb

The explosion protection marking for use in category 2G is:

II 2G Ex db eb mb IIC T6...T2 Gb

The explosion protection marking for use in the seperation wall between categories 1D und 2D is:

II 1D/2D Ex ta/tb mb IIIC T120 °C/T80 °C...T300 °C/T226 °C Da/Db

The explosion protection marking for use in category 2D is:

II 2D Ex tb mb IIIC T80 °C...T226 °C Db

The explosion protection marking for use in the seperation wall between categories 1G and 2D is:

II 1G/2D
Ex db eb mb IIC T5 ...T1 Ga
Ex tb mb IIIC T80 °C...T226 °C Db

The explosion protection marking for use in the seperation wall between categories 1D and 2G is:

Ⓔx II 1D/2G
Ex ta IIIC T120 °C...T300 °C Da
Ex db eb mb IIC T6 ...T2 Gb

GAS 222.10/11/30/35-U:

The explosion protection marking for use in the seperation wall between categories 1G and 2G is:

Ⓔx II 1G/2G Ex db eb mb IIC T4 Ga/Gb

The explosion protection marking for use in category 2G is:

Ⓔx II 2G Ex db eb mb IIC T4 Gb

The explosion protection marking for use in the seperation wall between categories 1D und 2D is:

Ⓔx II 1D/2D Ex ta/tb mb IIIC T130°C Da/Db

The explosion protection marking for use in category 2D is:

Ⓔx II 2D Ex tb mb IIIC T130 °C Db

The explosion protection marking for use in the seperation wall between categories 1D und 2D is:

Ⓔx II 1G/2D
Ex db eb mb IIC T4 Ga
Ex tb mb IIIC T130 °C Db

The explosion protection marking for use in the seperation wall between categories 1D and 2G is:

Ⓔx II 1D/2G
Ex ta IIIC T130 °C Da
Ex db eb mb IIC T4 Gb

These are the maximal markings and depends on the used configuration.

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Freiberg, 2020-10-01

[13] **Schedule**

[14] **Certificate number IBExU17ATEX1088 X** | Issue 1

[15] **Description of product**

A sample gas is transported through the gas sampling probe to a gas analyzer via an external sample gas pump.

Unheated Types
Unheated sample gas probes (type 10, 11, 30, 35-U) are designed for use in category 2G or 2D and for sampling from category 1G or 1D. The sample gas passes through a particle filter which is located inside the probe (type 10, 11) or outside the probe in the process (type 11). With version 11, it is possible to separate the inside of the probe from the process by means of a ball valve, e.g. to change the filter.

Heated Types
Heated sample probes (type 20, 21, 31, 35) are designed for use in category 2G and for sampling from category 1G. The sample gas passes through a particle filter which is located inside the probe (type 20, 21) or outside the probe in the process (type 21, 31, 35). With the versions 21 and 31, it is possible to separate the inside of the probe from the process by means of a ball valve, e.g. to change the filter (type 21). For category 1G / 1D applications, the temperature class inside is one class lower than outside.

Heated and unheated probes are suitable for an ambient temperature of -40 to +60°C. They are always equipped with approved electrical components (e.g. solenoid valves, terminal box). The type code and the implementation in the order configurator exclude the configuration of unheated probes without electrical components as type-tested devices.

The temperature classes and maximum surface temperatures depend solely on the selection of the components used.

Ambient temperature range:	-40 °C to +60 °C
Rated voltage:	115 V AC and 230 V AC
Rated frequency:	50/60 Hz

4 6 2 2 2												0						
																		sample probe basis unit
																		unheated
			1	0														GAS 222.10
			1	1														GAS 222.11
			3	0														GAS 222.30
			3	5														GAS 222.35-U
																		heated
			2	0														GAS 222.20
			2	1														GAS 222.21
			3	1														GAS 222.31
			3	5														GAS 222.35
																		junction box
					0													no (only GAS 222.10/11/30/35-U)
					1													yes
																		flange
						0	1											flange DN65 PN6
						0	2											flange DN3"-150
						x	x											others
																		hazardous area
																		outside
								4										zone 1
								7										zone 21
																		inside
									3									zone 0
									4									zone 1
									6									zone 20
									7									zone 21
									9									none
																		temperature class inside / outside (GAS 222.20/21/31/35)
														Ga/Gb		**Ga/Db**		**Da/Gb**	**Da/Db**
										2				T1 /T2		T1/T226°C		T300°C/T2	T300°C/T226°C
										4				T3/T4		T3/T130°C		T175°C/T4	T175°C/T130°C
										6				T5/T6		T5/T80°C		T120°C/T6	T120°C/T80°C
														temperature class inside / outside (GAS 222.20/21/31/35)					
														Gb/Gb		**Gb/Db**		**Db/Gb**	**Db/Db**
										2				T2/T2		T2/T226°C		T226°C/T2	T226°C/T226°C
										4				T4/T4		T4/T130°C		T130°C/T4	T130°C/T130°C
										6				T6/T6		T6/T80°C		T80°C/T6	T80°C/T80°C
														temperature class inside / outside (GAS 222.10/11/30/35-U)					
														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
														power supply sample probe					
												0		none (only for GAS 222.10/11/30/35-U)					
												1		115 V (only for GAS 222.20/21/31/35)					
												2		230 V (only for GAS 222.20/21/31/35)					
														calibration gas port					
													0	no					
													1	6 mm					
													2	6 mm + check valve					
													3	1/4					
													4	1/4" + check valve					
														pressure vessel					
														0	no				
														1	yes				
															purge valve				
															0	ball valve			
															1	solenoid valve 110 V (marked with „mb") (only T2-T4 oder T130°C)			
															2	solenoid valve 230 V (marked with „mb") (only T2-T4 oder T130°C)			
															3	solenoid valve 24 V (marked with „mb") (only T2-T4 oder T130°C)			
															9	without			
																pneumatic actuator for internal ball valve			
																0	no		
																1	mono stable depressurized open (only for GAS 222.11/30/21/31)		
																2	mono stable depressurized closed (only forGAS 222.11/30/21/31)		
																	limit switch for pneumatic actuator		
																	0	no	
																	1	yes (only for GAS 222.11/30/21/31) (marked with „db" or „ta" or „tb")	
																		solenoid valve for pneumatic actuator	
																		0	no
																		1	110V (only for GAS 222.11/30/21/31) (marked with "mb") (only T2-T4 or T130°C)
																		2	230V (only for GAS 222.11/30/21/31) (marked with "mb") (only T2-T4 or T130°C)
																		3	24V (only for GAS 222.11/30/21/31) (marked with "mb") (only T2-T4 or T130°C)

Variationss compared to issue 0:

- Addition of certification for the use in hazardous dust atmospheres category 2D and sampling of hazardous dust atmospheres category 1D.
- Inclusion of the unheated probe types (10, 11, 30, 35-U) in combination with an ex-approved electrical component
- Changes to approved Ex-components

[16] **Test report**
The test results are recorded in the confidential test report IB-19-3-0059 of 2020-08-14.
The test documents are part of the test report and they are listed there.

Summary of the test results
The sample gas probe type GAS 222.xx(-x) Ex1 meets the requirements of explosion protection for devices of Group II, Category 2G and 1G/2G in type of protection increased safety with flameproof and encapsulated attachments as well as Category 2D and 1D/2D for dust explosion hazardous areas in type of protection protection by enclosure as well as for the combinations 1D/2G and 1G/2D.

[17] **Specific conditions of use**
- Strain relief for the cable connection must be installed.
- The cable must be secured against twisting and loosening.
- When extracting from category 1G or 1D, the more critical temperature class / maximum surface temperature in-side must be considered.
- The extended ambient temperature range is -40 °C up to +60 °C but further depends on the components used. Additional information is mentioned in the instructions.

[18] **Essential health and safety requirements**
In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report: None

[19] **Drawings and Documents**
The documents are listed in the test report.

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By order

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Freiberg, 2020-10-01