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EXPLOSION PROTECTION CERTIFICATE OF CONFORMITY

Cert No. GYJ25.1024X

Manufacturer WIKA Alexander Wiegand SE & Co.KG
(Address: Alexander-Wiegand-Straße 30, 63911 Klingenberg, Germany)

Product Pressure gauge

Model specified in the attachment to this certificate

Ex marking see attachment

Product standard /
14014747.03, 14140292.03, 14143625.03, 14143934.03, 14145016.03,
14145049.03, 14024212.03, 14141235.03, 14157055.03, 14023466.03,
14023468.03, 14143600.03, 14144021.03, 14157097.03, 14157106.03,
14157118.03, 14157131.03, 14160165.03, 14160174.03

Drawing number

The product was found to comply with the following standard(s):

GB/T 3836.1-2021, GB/T 3836.4-2021

Valid until: 2030.03.02

Remarks

1. Conditions for safe use are specified in the attachment(s) to this certificate.
2. Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment(s) to this certificate.
3. Model designation is specified in the attachment(s) to this certificate.
4. Intrinsically safe parameters are specified in the attachment(s) to this certificate.
5. This certificate is also applicable for the product with same type manufactured by WIKA Polska spółka z ograniczoną odpowiedzialnością SGF sp.k. (Address: ul. Kawka 6 87-800 Włocławek Poland).
6. This certificate is also applicable for the product with the type PGS23.1X0 manufactured by WIKA Instrumentation (Suzhou) Co., Ltd. (Address: No.81, Ta Yuan Road SND Suzhou, PR China 215011).

Approval

Shanghai Inspection and Testing Institute of
Instruments and Automation Systems Co., Ltd.
National Supervision and Inspection Center for
Explosion Protection and Safety of Instrumentation
Date of issue 2025.03.03

This Certificate is valid for products compatible with the documents and samples approved by NEPSI.



(GYJ25.1024X)

(Attachment I)

Attachment I to GYJ25.1024X

(translation)

Model xGx/ 1x1.11.050/ 232.35.063/ 4xx.x6/ 5xx.5x/ 632/ 736 Series Pressure gauge, manufactured by WIKA Alexander Wiegand SE & Co.KG and WIKA Polska spółka z ograniczoną odpowiedzialnością SGF sp.k., and Model PGS23.1X0 Pressure gauge manufactured by WIKA Instrumentation (Suzhou) Co., Ltd. have been certified and accords with following standards:

GB/T3836.1-2021 Explosive atmospheres-Part 1: Equipment-General requirements

GB/T3836.4-2021 Explosive atmospheres-Part 4: Equipment protection by intrinsic safety “i”

The Ex marking is

Ex ia IIC T6/T5/T4* Gb

Ex ia IIIB T85°C/T95°C/T100°C/T135°C* Db

Ex ia IIB T6/T5/T4* Gb/ Ex ia IIA T6/T5/T4* Gb (For models with PTFE lining)

*See Annex for full details of applicable temperature range and ratings.

Its certificate number is GYJ25.1024X.

Type approved in this certificate is shown as follows:

a G b c d e . f + g + h i

Note: **a** indicates Function #1(not relevant for explosion protection), including P,DP or AP;

b indicates Function #2(not relevant for explosion protection), including S or T;

c indicates Type of measuring element (not relevant for explosion protection), including 2,4 or 6;

d indicates Material of wetted parts (not relevant for explosion protection), including 1,3,6 or 8;

e indicates Overpressure safety (not relevant for explosion protection), including none or HP;

f indicates Nominal size, including 063(only for PGS) ,100 or 160;

g indicates Integrated transmitter (option II:GT,otherwise left blank), including 892.44(only for NS 100,160);

h indicates Type of electrical accessories (always with option II: GS or optional with GT), including 831 (only for NS 063),831-N,831-SN,831-3.5N,831-3.5SN,831-3.5S1N or 851-A;

i indicates Option PTFE, including empty or +PTFE.

1 **a** 1.11.050 + 831-N

Note: **a** indicates Material of measuring element (not relevant for explosion protection), including 1 or 3.

232.35.063 + **a**

Note: **a** indicates Type of electrical accessories, including 831,831-N,831-SN or 851-A.

4 **a b . c** 6. **d + e f**

Note: **a** indicates Material of measuring element (not relevant for explosion protection), including 3 or 6;
b indicates Case filling (not relevant for explosion protection), including 2 or 3;
c indicates Type of case (not relevant for explosion protection), including 5 or 3;
d indicates Nominal size (not relevant for explosion protection), including 100 or 160;
e indicates Type of electrical accessories (optional), including blank,831-N,831-SN, 831-3.5N,831-3.5SN,831-3.5S1N or 851-A;
f indicates Option PTFE, including empty or +PTFE.
(An option for **e** has to be chosen.)

5 **a b . 5 c . d + e**

Note: **a** indicates Material of measuring element (not relevant for explosion protection), including 3 or 6;
b indicates Case filling (not relevant for explosion protection), including 2 or 3;
c indicates Accuracy (not relevant for explosion protection), including 2.3 or 4;
d indicates Nominal size (not relevant for explosion protection), including 100 or 160;
e indicates Type of electrical accessories (optional), including blank,831-N,831-SN, 831-3.5N,831-3.5SN,831-3.5S1N or 851-A.
(An option for **e** has to be chosen.)

632.51. **a + b**

Note: **a** indicates Nominal size (not relevant for explosion protection), including 100 or 160;
b indicates Type of electrical accessories (optional), including blank,831-N,831-SN, 831-3.5N,831-3.5SN,831-3.5S1N or 851-A.
(An option for **b** has to be chosen.)

736.51. **a + b**

Note: **a** indicates Nominal size (not relevant for explosion protection), including 100 or 160;
b indicates Type of electrical accessories (optional), including blank,831-N,831-SN, 831-3.5N,831-3.5SN,831-3.5S1N or 851-A.
(An option for **b** has to be chosen.)

1. Special Conditions for Safe Use

The suffix "X" placed after the certificate indicates that the product is subject to special conditions for safe use specified as follows:

1.1 Models which incorporate PTFE lining may be marked for use in Gas Groups IIA or IIB as well as IIC and Dust Hazardous Area Group IIIB Models marked for Groups IIC or IIIB shall also incorporate a warning label advising the user of a potential electro-static hazard within the process connection area. The user shall take all necessary precautions to mitigate the risk of electro-static discharge within the process connection.

1.2 The equipment may incorporate an integral cable. The user shall ensure that, when installed, the cable is fixed in place and is protected from mechanical damage.

1.3 For the presence of combustible dust applications, under certain extreme circumstances, the non-metallic coating of the enclosure or polycarbonate window of this equipment may generate an ignition-capable level of electrostatic charge. The user shall implement precautions to prevent the build-up of electrostatic charge, e.g. clean with a damp cloth.

1.4 The following table details the applicable temperature class and ambient temperature for Explosive gas atmospheres applications:

Table 1 - Ambient temperature for gas IIA, IIB, IIC:

Equipment containing:				Temperature class	Ambient temperature
Proximity sensors		Bi-stable reed switch	4 - 20mA transmitter		
Equipment suffixes: 831-N, 831-3.5N, 831-SN, 831-3.5S1N, 831-3.5SN	Equipment suffix 831	Equipment suffix 851-A	Equipment Suffix: 892.44		
Y	N	N	N	T6 T5	-20°C~+60°C -20°C~+70°C
N	Y	N	N	T6 T5	-20°C~+60°C -20°C~+70°C
N	N	Y	N	T6	-20°C~+70°C
N	N	N	Y	T6 T5 T4	-20°C~+45°C -20°C~+60°C -20°C~+70°C
Y	N	N	Y	T6 T5 T4	-20°C~+45°C -20°C~+60°C -20°C~+70°C
N	N	Y	Y	T6 T5 T4	-20°C~+45°C -20°C~+60°C -20°C~+70°C

1.5 The following table details the applicable maximum surface temperature and ambient temperature for combustible dust applications:

Table 2 – Ambient temperature for dust IIIA and IIIB:

Equipment containing:				Maximum surface temperature	Ambient temperature
Proximity sensors		Bi-stable reed switch	4 - 20mA transmitter		
Equipment suffixes: 831-N、831-3.5N、831-SN、 831-3.5S1N、831-3.5SN	Equipment Suffix: 831	Equipment Suffix: 851-A	Equipment Suffix: 892.44		
Y	N	N	N	T135°C	-20°C~+70°C
N	Y	N	N	T95°C	-20°C~+70°C
N	N	Y	N	T85°C	-20°C~+70°C
N	N	N	Y	T85°C T100°C T135°C	-20°C~+45°C -20°C~+60°C -20°C~+70°C
Y	N	N	Y	T135°C	-20°C~+70°C
N	N	Y	Y	T85°C T100°C T135°C	-20°C~+45°C -20°C~+60°C -20°C~+70°C

2. Conditions for Safe Use

2.1 Connections to switches, proximity sensors, and 4-20mA transmitter, have the following safety descriptions:

Table 3 – Intrinsic safety parameters

		maximum input voltage U_i (V)	Maximum input current I_i (mA)	maximum input power P_i (W)	maximum equivalent internal parameter	
					C_i (nF)	L_i (μ H)
Proximity sensors	Equipment suffixes: 831-N, 831-SN, 831-3.5S1N, 831-3.5SN	16	25	0.064	30	100
	Equipment suffix: 831-3.5N	16	25	0.064	50	250
	Equipment suffix: 831	20	60	0.13	250	350
Bi-stable reed switch	Equipment suffix: 851-A	30	100	1.0	0	0
4 - 20mA transmitter	Equipment suffix: 892.44	30	100	0.72	11	0

The equipment is fitted with one or two external 6 pole or 4 pole connectors or an integral cable for connection of the internal transmitter, switches and proximity sensors to associated apparatus located in the safe area. The equipment label details which internal equipment is connected to which poles of the external connectors.

2.2 The following table gives details of the model numbers, sizes, and equipment suffixes for the various options:

Table 4 - Equipment types
(N = option not available, Y = always fitted, 0, 1, 2 or 3 = number of devices that maybe fitted).

		Sensor/switch type (only one of these options may be fitted)						Bi-stable reed switch	4 - 20mA transmitter
		Proximity sensors							
WIKA part no suffix:		831-N	831-3.5N	831-SN	831-3.5S1N	831-3.5SN	831	851-A	892.44
Model name and type	Size								
PGS (Pressure)	063	1 or 2	N	1 or 2	N	N	1 or 2	1	N
	100	1 to 3	1 or 2	1 to 3	1 or 2	1 or 2	N	1 or 2	N
	160	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3	N	1 or 2	N
DPGS (Differential pressure)	100	1 to 3	1 or 2	1 to 3	1 or 2	1 or 2	N	1 or 2	N
	160	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3	N	1 or 2	N
PGT (Relative pressure)	100	0 to 3	0 to 2	0 to 3	0 to 2	0 to 2	N	0 to 2	Y
APGT (Absolute pressure)	160	0 to 3	0 to 3	0 to 3	0 to 3	0 to 3	N	0 to 2	Y
DPGT (Differential pressure)									
1x1.11.050 (Relative pressure)	050	1	N	N	N	N	N	N	N
232.35.063 (Relative pressure)	063	0 to 2	N	0 to 2	N	N	0 to 2	0 or 1	N
4xx.x6 (High overpressure)	100	0 to 3	0 to 2	0 to 3	0 to 2	0 to 2	N	0 to 2	N
	160	0 to 3	0 to 3	0 to 3	0 to 3	0 to 3	N	0 to 2	N
5xx.5x (Relative pressure)	100	0 to 3	0 to 2	0 to 3	0 to 2	0 to 2	N	0 to 2	N
	160	0 to 3	0 to 3	0 to 3	0 to 3	0 to 3	N	0 to 2	N
632 (Absolute pressure)	100	0 to 3	0 to 2	0 to 3	0 to 2	0 to 2	N	0 to 2	N
	160	0 to 3	0 to 3	0 to 3	0 to 3	0 to 3	N	0 to 2	N
736 (Differential pressure)	100	0 to 3	0 to 2	0 to 3	0 to 2	0 to 2	N	0 or 2	N
	160	0 to 3	0 to 3	0 to 3	0 to 3	0 to 3	N	0 or 2	N

Note - all models have at least one proximity sensor, or one bi-stable reed switch, or a 4-20mA transmitter fitted.

2.3 The User shall ensure that all electrical components within the equipment are suitable for total immersion in any fluid with which the equipment may be filled.

2.4 The user shall consider that heat may be transferred along the measurement probe and the equipment shall not exceed the maximum permitted ambient temperature.

2.5 This product should be used in explosive gas atmospheres together with approved associated apparatus, follow the instruction manual of this product and associated apparatus when connecting the wiring. Connect the wiring terminals correctly.

2.6 Connecting cable between this product and associated apparatus should be insulated screen cable; connect the cable screen functionally to earth ground.

2.7 Clean the surface of this product termly when using in combustible dust atmosphere.

2.8 The user shall not change the configuration in order to maintain/ensure the explosion protection performance of the equipment. Any change may impair safety.

2.9 For installation, use and maintenance of the product, the end user shall observe the instruction manual and the following standards:

GB/T3836.13-2021 Explosive atmospheres- Part 13:Equipment repair, overhaul and reclamation .

GB/T3836.15-2017 Explosive atmospheres- Part 15:Electrical installations design, selection and erection.

GB/T3836.16-2022 Explosive atmospheres- Part 16:Electrical installations inspection and maintenance.

GB/T3836.18-2024 Explosive atmospheres-Part 18:Intrinsically safe electrical systems

GB50257-2014 Code for construction and acceptance of electric equipment on fire and explosion hazard electrical equipment installation engineering.

GB15577-2018 Safety regulations for dust explosion prevention and protection.

3. Manufacturer's Responsibility

3.1 Conditions for safe use, as specified above, should be included in the documentation the user is provided with.

3.2 Manufacturing should be done according to the documentation approved by NEPSI.



Shanghai Inspection and Testing
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National Supervision and Inspection Center
for Explosion Protection and Safety of Instrumentation
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