IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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Certificate No.:	**IECEx CML 25.0037X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2025-05-29)
Date of Issue:	2025-10-07		
Applicant:	**WIKA Alexander Wiegand SE & Co. KG** Alexander-Wiegand-Strasse 30 63911 Klingenberg **Germany**		
Equipment:	**Pressure and temperature gauges types xGS, xGT, 1x1.11.050, 232.35.063, 4xx.x6, 5xx.5x, 632, 736, and x74**		
Optional accessory:			
Type of Protection:	**Intrinsic safety "ia"**		
Marking:	Ex ia IIC T6/T5/T4* Gb Ex ia IIIB T85°C/T95°C/T100°C/T135°C* Db Ta= -20°C to +45°C/+60°C/+70°C* ***See Product Description for full details of applicable ambient temperature range and Temperature Ratings**		

Approved for issue on behalf of the IECEx Certification Body:	**Stelios Roumbedakis**
Position:	**Certification Manager**
Signature: (for printed version)	S.Roumbedakis
Date: (for printed version)	2025-10-07

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IECEx Certificate of Conformity

Certificate No.: **IECEx CML 25.0037X**

Date of issue: 2025-10-07

Issue No: 1

Manufacturer: **WIKA Alexander Wiegand SE & Co. KG**
Alexander-Wiegand-Strasse 30
63911 Klingenberg
Germany

Manufacturing locations:

WIKA Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Strasse 30
63911 Klingenberg
Germany

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87-800 Włocławek
Poland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/CML/ExTR25.0095/00 GB/CML/ExTR25.0196/00

Quality Assessment Report:

DE/BVS/QAR07.0010/21

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Pressure and temperature gauge types xGS, xGT, 1x1.11.050, 232.35.063, 4xx.x6, 5xx.5x, 632, 736, and x74 are a range of mechanical-temperature and mechanical-pressure gauges with integrated switches or certified proximity sensors, and 4-20mA transmitters which allow a variety of electrical outputs to be provided. The equipment is certified as intrinsically safe for use in groups IIA, IIB and IIC gases and group IIIB combustible dusts and has equipment protection levels “Gb” and “Db”.

See Certificate Annex for full Product Description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:
See Certificate Annex.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1

This issue introduced the following change:

1. To recognise an additional manufacturing location.

Annex:

Certificate Annex IECEx CML 25.0037X Issue 1.pdf

Description

The Pressure and temperature gauge types xGS, xGT, 1x1.11.050, 232.35.063, 4xx.x6, 5xx.5x, 632, 736, and x74 are a range of mechanical-temperature and mechanical-pressure gauges with integrated switches or certified proximity sensors, and 4-20mA transmitters which allow a variety of electrical outputs to be provided. The equipment is certified as intrinsically safe for use in groups IIA, IIB and IIC gases and group IIIB combustible dusts and has equipment protection levels “Gb” and “Db”.

The equipment may contain a 4-20mA transmitter, and/or bi-stable reed switches, and/or previously separately certified proximity sensors.

The equipment part number suffixes define the type and quantity of switches and/or proximity sensors fitted within the equipment, and whether or not a transmitter is fitted. Part numbers have one of the following generic formats:

X Y Z + T + S (+PTFE)

Option	Coated Measuring System
Switch/sensor type	851-A Reed switch
	851-DA Reed switch
	831-x Proximity switch (various types)
Transmitter	892.44 4-20mA transmitter fitted
	Blank – no transmitter fitted
Size (up to 3 digits)	050 – 50mm nominal diameter
	063 – 63mm nominal diameter
	100 – 100mm nominal diameter
	160 – 160mm nominal diameter
Options (up to 2 digits)	Describing options which are not relevant for explosion protection (e.g. measuring element type)
Model name and type (up to 3 digits)	e.g. 232, 736, 632 etc.

X . Y + T + S (+PTFE)

Option	Coated Measuring System
Switch/sensor type	851-A Reed switch
	851-DA Reed switch
	831-x Proximity switch (various types)
Transmitter	892.44 4-20mA transmitter fitted
	Blank – no transmitter fitted
Options (up to 2 digits)	Describing options which are not relevant for explosion protection (e.g. measuring element type)
Model name and type (up to 8 digits)	e.g. DPGT43HP, TGS73, PGT23, A74 etc.

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

Table 1 – Equipment types

(N = option not available, Y = always fitted, O = optional, 0, 1, 2 or 3 = number of devices that may be fitted).

		Sensor/switch type (only one of these options may be fitted)							**4 - 20mA transmitter**
		Proximity sensors						**Bi-stable reed switch**	
WIKA part no suffix:		831-N	831-3.5N	831-SN	831-3.5S1N	831-3.5SN	831	851-A 851-DA	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
APGS (absolute pressure) DPGS (Differential pressure) TGS (Temperature)	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

		Sensor/switch type (only one of these options may be fitted)							4 - 20mA transmitter
		Proximity sensors						Bi-stable reed switch	
WIKA part no suffix:		831-N	831-3.5N	831-SN	831-3.5S1N	831-3.5SN	831	851-A 851-DA	892.44
Model name and type	**Size**								
PGT (Relative pressure) APGT (Absolute pressure) DPGT (Differential pressure)	100	0 to 3	0 to 2	0 to 3	0 to 2	0 to 2	N	0 to 2	Y
	160	0 to 3	0 to 3	0 to 3	0 to 3	0 to 3	N	0 to 2	Y
TGT (Temperature)	100	0 to 3	0 to 2	0 to 3	0 to 2	0 to 2	N	N	Y
	160	0 to 3	0 to 3	0 to 3	0 to 3	0 to 3	N	N	Y
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 or 2	0 to 3	0 or 2	0 or 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
X74 (Temperature)	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

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

All models have a lower operating temperature of -20°C.

The following tables 2 to 5, detail the applicable temperature class/surface temperature and maximum permitted ambient temperature. Where the equipment incorporates options which are present in more than one of the tables 2 to 5, the lowest determined ambient temperature applies.

Table 2

Equipment containing Proximity sensors			
Temperature class/ Maximum surface temperature	**Applied power (mW)**	**Ta (°C)**	
		Equipment suffixes: 831-N, 831-SN	**Equipment suffixes: 831-3.5N, 831-3.5S1N, 831-3.5SN**
T6	64 (Type 2)	60	60
	169 (Type 3)	30	30
	242 (Type 4)	Not permitted	
T4-T1	64 (Type 2)	70	70
	169 (Type 3)	63	70
	242 (Type 4)	36	53
T135°C	64 (Type 2)	70	70
	169 (Type 3)	44	56
	242 (Type 4)	Not permitted	

Table 3

Equipment containing Equipment suffix 831	
Temperature class/ Maximum surface temperature	**Ta (°C)**
T6	60
T4-T1	70
T95°C	60

Table 4

Equipment containing bi-stable reed switches Equipment suffix 851-A/851-DA	
Temperature class/ Maximum surface temperature	**Ta (°C)**
T6-T1	70
T85°C	70

Table 5

Equipment containing 4-20mA transmitter Equipment suffix 892.44		
Temperature class/ Maximum surface temperature	**Applied power (mW)**	**Ta (°C)**
T6	1000	45
T4-T1		70
T135°C	550	70
	650	70
	750	40

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.

Intrinsic safety is achieved by limiting energy storage and discharge, and by connecting to the non-hazardous area via intrinsically safe barriers.

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

Table 6

Proximity sensors			**Bi-stable reed switch**	**4 - 20mA transmitter**
Equipment suffixes: 831-N, 831-SN, 831-3.5S1N, 831-3.5SN	Equipment suffix 831-3.5N	Equipment suffix 831	Equipment suffix 851-A/851-DA	Equipment suffix 892.44
Ui = 16V	Ui = 16V	Ui = 20V	Ui = 30V	Ui = 30V
Ii = 25mA (Type 2) 52mA (Type 3) 76mA (Type 4)	Ii = 25mA (Type 2) 52mA (Type 3) 76mA (Type 4)	Ii = 60mA	Ii = 100mA	Ii = 100mA
Pi = 64mW (Type 2) 169mW (Type 3) 242mW (Type 4)	Pi = 64mW (Type 2) 169mW (Type 3) 242mW (Type 4)	Pi = 130mW	Pi = 1.0W	Pi = 550mW 650mW 750mW 1.0W
Ci = 30nF	Ci = 50nF	Ci = 250nF	Ci = 0	Ci = 6.5nF
Li = 100µH	Li = 250µH	Li = 350µH	Li = 0	Li = 0

Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.

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

iii. The equipment shall be capable of withstanding an electric strength test using a test voltage of 500 Vac applied between each individual circuit and earth, and between individual circuits, for 60s. Alternatively, a voltage of 20% higher may be applied for 1s. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.

iv. The manufacturer shall ensure that models incorporating a PTFE lining within the measurement element are identified as such.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

i. The temperature class, surface temperature, and permitted maximum ambient temperature, are dependent upon the options fitted within the equipment and may not be marked on the equipment label. The user shall refer to this certificate and to the equipment instructions for details of the applicable temperature class, surface temperature, and ambient temperature range.

ii. The user shall consider that heat may be transferred along the measurement probe and the equipment shall not exceed the maximum permitted ambient temperature. For further information, refer to the user instructions.

iii. Models which incorporate PTFE lining incorporate a warning label advising the user of a potential electro-static hazard within the process connection area when used in Groups IIC or IIIB. The user shall take all necessary precautions to mitigate the risk of electro-static discharge within the process connection.

iv. 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.

v. For Group III applications, under certain extreme circumstances, the non-metallic coating of the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. The user/installer shall implement precautions to prevent the build-up of electrostatic charge, e.g. locate the equipment where a charge-generating mechanism (such as wind-blown dust) is unlikely to be present and clean with a damp cloth.