IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx BVS 23.0027X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2023-12-20

Applicant: **WIKA Alexander Wiegand SE Co. KG**
Alexander-Wiegand-Straße 30
63911 Klingenberg
Germany

Equipment: **Pressure transmitter type PEU-2***

Optional accessory:

Type of Protection: **Intrinsic Safety "i", Equipment with Separation Elements or combined Levels of Protection**

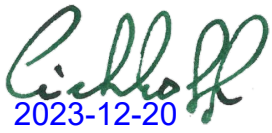
Marking:

Model	Ex-marking
PEU-2*-**C-*-*****-******-****	Ex ia IIC T6…T1 Ga
PEU-2*-**D-*-*****-******-****	Ex ia IIC T6…T1 Ga/Gb
PEU-2*-**E-*-*****-******-****	Ex ia IIC T6…T1 Gb
PEU-2*-**H-*-*****-******-****	Ex ia IIIC T135°C Da
PEU-2*-**F-*-*****-******-****	Ex ia IIIC T135°C Da/Db
PEU-2*-**G-*-*****-******-****	Ex ia IIIC T135°C Db

Approved for issue on behalf of the IECEx Certification Body: **Dr Franz Eickhoff**

Position: **Senior Lead Auditor, Certification Manager and officially recognised expert**

Signature: (for printed version)



Date: (for printed version) 2023-12-20

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Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

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Certificate No.: **IECEx BVS 23.0027X**

Date of issue: 2023-12-20 Issue No: 0

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

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

IEC 60079-26:2021 Explosive atmospheres - Part 26: Equipment with Separation Elements or combined Levels of Protection
Edition:4.0

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 Report:

DE/BVS/ExTR23.0035/00

Quality Assessment Report:

DE/BVS/QAR07.0010/18

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

Subject and Type

Pressure transmitter type PEU-2*

Type code

PEU - 2a - bcd - * - ***** - ef**** - ****

a **pressure connection option**
"0" = pressure channel
"1" = front flush

b **approvals**
"A, I, W, E, G, J, K, P, U, 1, 2, 3, 4 or 5" = ATEX + IECEx
"C, D, F" = IECEx

c **type of ignition protection**
"I" = Ex ia

d **zone**
"C" = Zone 0: Ex ia IIC T6…T1 Ga
"D" = Zone 1 adjacent to zone 0: Ex ia IIC T6…T1 Ga/Gb
"E" = Zone 1: Ex ia IIC T6…T1 Gb
"H" = Zone 20: Ex ia IIIC T135°C Da
"F" = Zone 21 adjacent to zone 20: Ex ia IIIC T135°C Da/Db
"G" = Zone 21: Ex ia IIIC T135°C Db

ef **process connection (maximum media temperature)**
e = any character
f = "4" or "2" model with cooling element for high media temperature
f = any character other than "4" or "2" for standard model

In the complete type denomination, the characters "*" can be replaced by further numbers or letters which characterize different variants without influence on explosion protection.

Description

The pressure transmitter type PEU-2* converts a pressure into a digital Signal which is transmitted via UART-interface (Universal Asynchronous Receiver Transmitter) to an external device, e.g. to a radio unit. It is intended for measuring the pressure in an area with potentially explosive atmosphere (gas/dust). The PEU-2* is intended for connection to intrinsically safe circuits of external devices.

Listing of all components used

Subject and type	Certificate	Standards
Pressure transducer TIS-2*	IECEx BVS 14.0051U	IEC 60079-0:2017, Ed. 7.0 IEC 60079-11:2011, Ed. 6.0 IEC 60079 26:2021, Ed. 4

SPECIFIC CONDITIONS OF USE: YES as shown below:

1 The permissible ambient temperature range depends on the temperature class. Refer to the manufacturer's instructions.

2 For functional reasons, the partition wall (membrane) to the wetted area has a wall thickness < 0.2 mm. In the application it has to be ensured, that an impairment of the separation wall e.g. by aggressive media or mechanical hazards is excluded.

3 In gas-explosive areas, the device shall be installed in such a way that electrostatic charging at the type label is excluded.

4 In dust-explosive areas with conductive dust IIIC, the intrinsically safe circuit is not safely separated from earth/potentially earthed metal parts. Along the intrinsically safe circuit, potential equalization must exist.

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Equipment (continued):

1 Electrical parameters

Supply and signal circuit
Connection via M12-plug

Maximum input voltage	U_i	DC	6.7	V
Maximum input current	I_i		250	mA
Maximum input power	P_i		300	mW
Effective internal capacitance	C_i		4.4	nF
Effective internal inductance	L_i		negligible	

The pressure transmitter PEU-2* has to be considered as power supply circuit with the following values:

Maximum output current[(1)]	I_o		400	mA
Maximum output voltage (= U_i) [(1)]	U_o	DC	6.7	V

[(1)] (short-time; from capacitor discharge time constant: 5*τ < 25 ms; based on IECEx BVS 14.0051U)

2 Thermal parameters

2.1 Ambient temperature range for ambient temperature = media temperature

Temperature class T1 to T4	-40 °C … 80 °C
Maximum surface temperature T135°C for Dust ex-atmosphere	-40 °C … 80 °C

2.2 Ambient temperature range for high media temperature range

Temp. class	Maximum media temperature [°C]	Maximum ambient temperature [°C]	
		All models except PEU-2*-***-*-*****-*2****-**** and PEU-2*-***-*-*****-*4****-**** (Models without cooling element)	Models PEU-2*-***-*-*****-*2****-****, PEU-2*-***-*-*****-*4****-**** (Models with cooling element)
T3	150	N / A	40
T4	120	30	50
T4	105	40	50
T4	85	80	80
T5	85	80	80
T6	70	70	70