



- [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 **IBExU10ATEX1124 X** | Issue 1
- [4] Product: **Piezoresistive pressure transmitter and temperature transmitter**
Type: Serie 23SYEi, 23YEi, 23YMEi, 25YEi, 26YEi and 26YMEi as well as PT-25YEi
- [5] Manufacturer: KELLER AG für Druckmesstechnik
- [6] Address: St. Gallerstrasse 119
8404 Winterthur
SWITZERLAND
- [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-19-3-0083.

- [9] Compliance with the essential health and safety requirements has been assured by compliance with: EN 60079-0:2012+A11:2013, EN 60079-11:2012 and EN 50303:2000 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:

23SYEi, 23YEi, 23YMEi, 25YEi, 26YEi und 26YMEi:

- ⊕ I M1 Ex ia I Ma
- ⊕ II 1G Ex ia IIC T6 - T4 Ga
- ⊕ II 1D Ex ia IIIC T 130 °C Da

PT-25YEi: ⊕ II 1G Ex ia IIC T4 Ga

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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, 2019-07-05

[13] **Schedule**

[14] **Certificate number IBExU10ATEX1124 X | Issue 1**

[15] **Description of product**

The piezoresistive pressure transmitter is used for the measuring of absolute, relative and differential pressures in explosive atmospheres. The process pressure is converted into a proportional voltage signal resp. electrical signal. The pressure transmitter consists of a metallic enclosure with the process connections or without thread in the design level probe. The electrical connections are carried out by means of a plug respectively with an integrated connecting cable.

The new type transmits a temperature in an electrical signal. The mechanical design does not differ from the pressure transmitter.

Technical data

Ambient temperature range	T_a	-40 °C to +40/ +50/ +65/ +100 °C depending on temperature class and type																
Powersupply and data circuit (2-wire transmitter)		fixed cable or connecting plug																
maximum input voltage	U_i	30 V																
maximum input current	I_i	200 mA																
maximum input power	P_i	0.64 W / 1.1 W / 1.33 W all pressure transmitter types T4: <table border="1"> <thead> <tr> <th>Ambient temp. T_a</th> <th>Power P_i</th> </tr> </thead> <tbody> <tr> <td>40°C</td> <td>1.33 W</td> </tr> <tr> <td>65°C</td> <td>1.1 W</td> </tr> <tr> <td>100°C</td> <td>0.64 W</td> </tr> </tbody> </table> 2-wire transmitter T6: <table border="1"> <thead> <tr> <th>Ambient temp. T_a</th> <th>Power P_i</th> </tr> </thead> <tbody> <tr> <td>50°C</td> <td>1.33 W</td> </tr> </tbody> </table> temperature transmitter T4: <table border="1"> <thead> <tr> <th>Ambient temp. T_a</th> <th>Power P_i</th> </tr> </thead> <tbody> <tr> <td>50°C</td> <td>1.33 W</td> </tr> </tbody> </table>	Ambient temp. T_a	Power P_i	40°C	1.33 W	65°C	1.1 W	100°C	0.64 W	Ambient temp. T_a	Power P_i	50°C	1.33 W	Ambient temp. T_a	Power P_i	50°C	1.33 W
Ambient temp. T_a	Power P_i																	
40°C	1.33 W																	
65°C	1.1 W																	
100°C	0.64 W																	
Ambient temp. T_a	Power P_i																	
50°C	1.33 W																	
Ambient temp. T_a	Power P_i																	
50°C	1.33 W																	
maximum internal capacitance	C_i	negligible																
maximum internal inductance	L_i	negligible																
Output (3-wire transmitter)																		
maximum output voltage	U_o	14.7 V																
maximum output current	I_o	149 mA																
maximum internal capacitance	C_o	528 nF (pressure transmitter) 2 nF (temperature transmitter)																
maximum internal inductance	L_o	negligible																
Characteristics of fixed cable:	L' wire	1.2 µH/m																
	C' wire-wire	150 pF/m																
	C' wire-shield	250 pF/m																

Variation compared to EC Type Examination certificate and its amendments

A new type PT-25 YEi has been added.

[16] **Test report**

The test results are recorded in the confidential test report IB-19-3-0083 of 2019-07-03.

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

IBExU Institut für Sicherheitstechnik GmbH
An-Institut der TU Bergakademie Freiberg

Summary of the test results

The piezoresistive pressure transmitter further fulfils the requirements of the type of protection intrinsic safety on electrical equipment of group I, category M1 as well as group II, category 1G, explosion group IIC and temperature class T6 – T4 or category 1D with a maximum surface temperature of 130 °C.

The temperature transmitter fulfils the requirements of the type of protection intrinsic safety on electrical equipment of group II, category 1G, explosion group IIC and temperature class T4

[17] **Specific conditions of use**

- The ambient and medium temperature range varies according to the operating conditions and is specified in the instructions
- The permissible operating pressures are specified in the manufacturer's documents.
- The electric strength of the metallic enclosure is $\leq 250 V_{eff}$.
- The safety and installation instructions in the operating manual have to be taken into account.
- For all cable sensors additional safety and installation instructions due to the danger of electrostatic discharges have to be taken into account.

[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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