



(1) **EC-TYPE-EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**



(3) EC-type-examination Certificate Number:

PTB 05 ATEX 2012 X

(4) Equipment: Digital pressure gauge, type LEX 1 Ei or LEO RECORD Ei

(5) Manufacturer: Keller AG für Druckmesstechnik

(6) Address: St. Gallerstraße 119, 8404 Winterthur, Switzerland

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 05-25018 .

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014:1997 + A1 + A2 **EN 50020:2002**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 2 G EEx ia IIC T6

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, April 21, 2005

(signature)

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

3 pages, correct and complete as regards content.
By order:

Dr.-Ing. Johannsmeyer Braunschweig, November 19, 2008
Direktor und Professor

sheet 1/3

(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2012 X

(15) Description of equipment

The digital pressure gauge, type LEX 1 Ei or LEO RECORD Ei is a battery-powered pressure gauge and serves for the measurement and storage of pressures.

For relationship between type of equipment, ambient temperature and temperature class, reference is made to the following table:

	Ambient temperature	Temperature class
LEX 1 Ei	-20 up to +65 °C	T6
LEO RECORD Ei	-20 up to +60 °C	T4

Electrical data

Internal supply LEX 1 Ei

3,3 V (DC); type of battery approved for power supply:
Renata CR 2430, size: coin cell

Internal supply LEO RECORD Ei

3,6 V (DC); type of battery approved for power supply:
Sonnenschein SL-760, size: AA

Interface RS485

Only for connection outside of the hazardous area.
Safety-related maximum voltage $U_m = 5,7 \text{ V}$

(16) Test report PTB Ex 05-25018

(17) Special conditions for safe use

1. The maximum permissible ambient temperature range for the digital pressure gauge depends on the type of equipment and shall be taken from the above table.
2. The temperature class of the digital pressure gauge depends on the type of equipment and shall be taken from the above table.
3. The RS485 digital interface of the digital pressure gauge shall be connected to the pressure gauge and operated only outside of the hazardous area. A safety-related maximum voltage of 5.7 V shall be guaranteed for the operation of the interface.
4. The batteries of the digital pressure gauge may be replaced inside the hazardous area.

sheet 2/3

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz

Braunschweig, April 21, 2005

By order:

(signature)

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

1. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2012 X

(Translation)

Equipment: Digital pressure gauge, type LEX 1 Ei or LEO RECORD Ei with capacitive sensor

Marking:  II 2 G EEx ia IIC T4

Manufacturer: Keller AG für Druckmesstechnik

Address: St. Gallerstraße 119, 8404 Winterthur, Switzerland

Description of supplements and modifications

The digital pressure gauge, type LEX 1 Ei or LEO RECORD Ei is a battery-powered pressure gauge and serves for the measurement and storage of pressures. Alternatively, the digital pressure gauge can also be operated with a capacitive sensor.

All specifications implemented so far and the special conditions apply without changes.

Test report: PTB Ex 07-27233

Zertifizierungsstelle Explosionsschutz

Braunschweig, July 23, 2007

By order:

(signature)

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

1 page, correct and complete as regards content.

By order:

Dr.-Ing. Johannsmeyer
Direktor und Professor

Braunschweig, November 19, 2008

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2nd SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2012 X

(Translation)

Equipment: Digital manometer type LEX 1 Ei resp. LEO RECORD Ei

Marking:  II 2 G EEx ia IIC T4

Manufacturer: Keller AG

Address: St. Gallerstrasse 119, 8404 Winterthur, Switzerland

Description of supplements and modifications

The digital manometer type LEX 1 Ei resp. LEO RECORD Ei may be produced with the modifications according to the documents specified in the Assessment and Test Report mentioned below. The modifications refer to the internal structure.

The basis for the standards has changed as follows:

Applied standards

EN 60079-0:2006	EN 60079-11:2007
-----------------	------------------

The marking according the above mentioned standards shall include the following details:

 II 2 G Ex ia IIC T4 resp. T6

	Ambient Temperature	Temperature Class
LEX 1 Ei	-20 up to +65 °C	T6
LEO RECORD Ei	-20 up to +60 °C	T4

All other specifications made so far are valid without changes.

Assessment and test report: PTB Ex 09-29165

Zertifizierungssektor Explosionschutz
By order:

Braunschweig, September 29, 2009

Dr.-Ing. U. Johannsmeyer
Direktor und Professor



Sheet 1/1

ZSEX10101e.dot