

1 **UNITED KINGDOM CONFORMITY ASSESSMENT**
2 **UK TYPE EXAMINATION CERTIFICATE**

3 **Product Intended for use in Potentially Explosive Atmospheres**
4 **UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1**

5 Type Examination Certificate Number: **ExV 21UKEX1018X** Issue: **0**

6 Product: **Numeric manometer, type: LEO1-Ei, LEO2-Ei, ECO2-Ei**

7 Manufacturer: **KELLER AG für Druckmesstechnik**

8 Address: **St. Galler Strasse 119, CH 8404 Winterthur, Switzerland**

9 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

10 ExVeritas Limited Approved Body number 2585, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), 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 Schedule 1 of the Regulations.

11 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with:


EN IEC 60079-0: 2018 **EN 60079-11: 2012**

Except in respect of those requirements listed at section 16 of the schedule to this certificate.

12 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.

13 This TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

14 The marking of the equipment shall include the following:

 II 1 G Ex ia IIC T5 Ga T_{amb}: Refer to Section 13 'Description of Product'



No. 8613

On behalf of ExVeritas



S Clarke CEng MSc FIET
Managing Director

Certificate: **ExV 21UKEX1018X**

Issue **0**

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Schedule

13 Description of Product

Functional description:

Numeric manometers, Series LEO1-Ei, LEO2-Ei and ECO2-Ei are industrial pressure transmitters to measure absolute, relative and differential pressure.

The pressure transducer consists of a piezoresistive silicon chip mounted on a glass-feed-through, a ceramic and a case with a thin metal-diaphragm to transmit the pressure.

The transducer case is filled up with isolating oil.

The pressure signal of the Wheatstone-bridge of the silicon chip is taken out by the pins of the glass-feed-through.

$-10\text{ °C} \leq T_{amb} \leq +80\text{ °C}$

Mechanical description:

Mechanical parts of the transducer are welded or brazed together.

The pressure connection depends on end-user's requirements: male or female thread, front-flash diaphragm for example.

Product range:

Models: LEO1-Ei, LEO2-Ei, ECO2-Ei.

The three models are electronically similar (same internal PCB used, same lithium cell). Main differences are dimensions and their signal precisions expected.

LEO1-Ei, LEO2-Ei, ECO2-Ei models are equipped with :

- an analog sensor as standard version,
- a record memory 2 Mbit (as option N°3),
- an external temperature sensor (as option N°4),
- a pressure sensor connection with flex-board (as option N°5),
- an analog sensor scale (as option N°6).

Options 1 and 2 are not available.

Intrinsic safety parameters:

Equipment supplied by lithium cell RENATA CR2430.

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R3481/A/3	2021-12-16	0	Initial issue of the Prime Certificate

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14.2 Compliance Drawings:

Title:	Drawing No.:	Rev. Level:	Date:
*Technical File	DT061100	05	2018/10/26
* LEO1-Ei Instruction notice	Manual_Mano-LEO1-Ei_g-e-f	-	-
* LEO2-Ei Instruction notice	Manual_Mano-LEO2-Ei_g-e-f	-	-
* ECO2-Ei Instruction notice	Manual_Mano-ECO2-Ei_g-e-f	-	-
Marking Drawing For UKCA Approval in United Kingdom (LEO1-Ei, LEO2-Ei, ECO2-Ei)	04-00013-04	A	2021/11/08

15 Specific Conditions of Use

15.1 Special Conditions for Safe Use

1. Ambient temperature range: -10 °C to +80 °C
2. When apparatus is used in hazardous area, no other equipment shall be connected on LCD and RS485 pins.
3. The equipment is an autonomous apparatus, powered only by a lithium cell RENATA CR2430.
4. Equipment could create potential electrostatic charging hazard, please refer to instructions.

15.2 Routine tests

- None

16 Essential Health and Safety Requirements (Regulations Schedule 1)

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform ExVeritas of any modifications to the design of the product described by this schedule.

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