



# 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](http://www.iecex.com)

Certificate No.: **IECEX LOM 17.0001X** Page 1 of 4 Certificate history:  
Status: **Current** Issue No: 2 [Issue 1 \(2021-12-17\)](#)  
[Issue 0 \(2017-04-03\)](#)  
Date of Issue: 2023-05-24  
Applicant: **Kobold Messring GmbH**  
Nordring 22-24  
D-65719 Hofheim  
Germany  
Equipment: **Counter/Flow controller ZOK-E\*K\*F3\*\* and ZOK-E\*M\*F3\*\***  
Optional accessory:  
Type of Protection: **"ia"**  
Marking: Ex ia IIC T4 Gb  
-20 °C ≤ Ta ≤ +60 °C  
IECEX LOM 17.0001X

Approved for issue on behalf of the IECEx  
Certification Body:

**Javier García Torrent**

Position:

**Certification Committee**

Signature:  
(for printed version)

Date:  
(for printed version)

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Certificate issued by:

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**Spain**





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Manufacturer: **Kobold Messring GmbH**  
Nordring 22-24  
D-65719 Hofheim  
**Germany**

Manufacturing  
locations:

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:

[ES/LOM/ExTR17.0001/00](#)  
[ES/LOM/ExTR17.0001/03](#)

[ES/LOM/ExTR17.0001/01](#)

[ES/LOM/ExTR17.0001/02](#)

Quality Assessment Report:

[DE/BVS/QAR09.0001/12](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The electronic units ZOK-E... are designed to calculate, display and transmit volume and flow from flowmeters having pulse output or frequency. These units can display flow rate, accumulated flow and zeroing in engineering units as programmed by the user.

The units are stand alone, or are designed for meter mounting on existing pulse output flowmeters.

The units ZOK-E... support up to two external inputs pulses that can be:

- Potential free contacts, simple electrical apparatuses.
- Intrinsically safe devices powered from this equipment, and with appropriate certification.
- Galvanically isolated intrinsically safe outputs from self-powered devices, and appropriate certification.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

Attention to electrostatic risk arising from the outer shell, made of plastic material, should be given. It must follow the safety instruction provided by the manufacturer.

Pulse inputs from intrinsically safe self-powered devices must have galvanic isolation from its internal power supplies.

Input specific parameters when the device is powered from a three wire connection correspond to the combination of the associated apparatuses.



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

To allow the use of two new types of primary lithium thionyl chloride battery cells

**Annex:**

[IECEX LOM 17.0001X\\_Annex\\_02.\\_1.pdf](#)



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## Variants and type codification:

Counter/flow controller electronics for meter mount	
ZOK-E1M*F3**	Flow counter, battery and external powered, no outputs, pulse signal input(s).
ZOK-E2M*F3**	Dosing unit, external powered, 2 optocoupler outputs, pulse signal input.
ZOK-E3M*F3**	Flow controller, battery, external or loop powered, 4-20mA output, 2/3-wire, pulse signal input(s). Outputs disabled during battery powering.
ZOK-E4M*F3**	Flow controller, battery, external or loop powered, 4-20mA output with fully HART functionality, pulse signal input(s). Outputs disabled during battery powering.
ZOK-E5M*F3**	Flow controller, external powered, 4-20mA output 3-wire, switching and pulse optocoupler outputs, pulse signal input(s).

Stand alone counter/flow controller electronics	
ZOK-E1K*F3**	Flow counter, battery and external powered, no outputs, pulse signal input(s).
ZOK-E2K*F3**	Dosing unit, external powered, 2 optocoupler outputs, pulse signal input.
ZOK-E3K*F3**	Flow controller, battery, external or loop powered, 4-20mA output, 2/3-wire, pulse signal input(s). Outputs disabled during battery powering.
ZOK-E4K*F3**	Flow controller, battery, external or loop powered, 4-20mA output with fully HART functionality, pulse signal input(s). Outputs disabled during battery powering.
ZOK-E5K*F3**	Flow controller, external powered, 4-20mA output 3-wire, switching and pulse optocoupler outputs, pulse signal input(s).

\* = other constructional variants



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The variants ZOK-E... support up to two external inputs pulses that can be:

- Potential-free contacts, simple electrical apparatuses
- Intrinsically safe devices powered from this equipment, and with appropriate certification
- Galvanically isolated intrinsically safe outputs from self-powered devices, and appropriate certification

Specific parameters of the type of protection

Power and 4-20 mA input terminals	$U_i$ : 28 V	$I_i$ : 100 mA	$P_i$ : 0.7 W
	$C_i$ : 0 (negligible)	$L_i$ : 0 (negligible)	
Input terminals for external sensors	$U_o$ : 8.2 V	$I_o$ : 100 mA	$P_o$ : 0.7 W
External power supply or from loop	$C_o$ : 3 uF	$L_o$ : the same as the power supply	
Input terminals for external sensors	$U_o$ : 3.9 V	$I_o$ : 48 mA	$P_o$ : 40 mW
Internal battery power supply	$C_o$ : 1000 uF	$L_o$ : 15 mH	
Optocoupler outputs	$U_i$ : 30 V	$P_i$ : 550 mW	
	$C_i$ : 0 (negligible)	$L_i$ : 0 (negligible)	