



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx LOM 17.0001X Issue No: 0 Certificate history:
Issue No. 0 (2017-04-03)

Status: **Current** Page 1 of 3

Date of Issue: **2017-04-03**

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
IECEX LOM 17.0001X

Approved for issue on behalf of the IECEx
Certification Body:

Carlos Fernández Ramón

Position:

Head of Certification

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Laboratorio Oficial J.M. Madariaga (LOM)
TECNOGETAFE
C/ Eric Kandel, 1
28906 Getafe (Madrid)
Spain





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

Additional Manufacturing location(s):

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 electrical apparatus 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0
IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

*This Certificate **does not** indicate compliance with electrical 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:

[ES/LOM/ExTR17.0001/01](#) [ES/LOM/ExTR17.0001/00](#)

Quality Assessment Report:

[DE/BVS/QAR09.0001/07](#)



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Schedule

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.

Annex:

[IECEX LOM 17.0001X_Annex.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 and 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

The products 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 : 28V, I_i : 100mA, P_i : 0,7W C_i : 0 (negligible), L_i : 0 (negligible) |
| Input terminals for external sensors External power supply or from loop | U_o : 8,2V, I_o : 100mA, P_o : 0,7W C_o : 3 μ F, L_o : The same as power supply |
| Input terminals for external sensors Internal battery power supply | U_o : 3,9V, I_o : 48mA, P_o : 40mW C_o : 1000 μ F, L_o : 15mH |