



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

Certificate No.:  issue No.:  Certificate history:

Status:

Date of Issue:  Page 1 of 3

Applicant: **Elster GmbH**  
Steinern Straße 19-21  
55252 Mainz-Kastel  
Germany

Electrical Apparatus: **Volume conversion device - Type: EK205**  
Optional accessory:

Type of Protection: **Ex ia**

Marking: **Ex ia IIC T4 Ga**  
(Refer to full marking in attachment)

Approved for issue on behalf of the IECEx  
Certification Body:

Julien GAUTHIER

Position:

Certification Officer

Signature:  
(for printed version)

Date:

2016-03-08

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.

Certificate issued by:

**Laboratoire Central des Industries Electriques (LCIE)**  
33 Avenue du General Leclerc  
FR-92260 Fontenay-aux-Roses  
France

Documents relative to LCIE certification activities (Certificates, QARs, ExTRs) can be registered under the references "LCI" or "LCIE".



**LCIE**



# IECEX Certificate of Conformity

Certificate No.: IECEx LCIE 16.0003X

Date of Issue: 2016-03-08

Issue No.: 0

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Manufacturer: **Elster GmbH**  
Steinern Straße 19-21  
55252 Mainz-Kastel  
**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:

[FR/LCIE/ExTR16.0006/00](#)

Quality Assessment Report:

[DE/TUN/QAR11.0003/02](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The EK205 volume conversion device is an electronic device that converts and displays the volume measured by a gas meter.

The equipment consists mainly of

- plastic housing,
- LCD display with keypads,
- CPU board equipped with two intrinsically safety inputs (DE1, DE2), two intrinsically safety outputs (DA1, DA2) and an intrinsically safety serial interface (Uext, T+/DTR, T-/TxD, R+/DCD, R-/RxD, GND, RING) for data communication,
- an internal pressure sensor and an external temperature sensor.

### CONDITIONS OF CERTIFICATION: YES as shown below:

- The equipment shall only be connected to certified associated intrinsically safe equipment. This association must be compatible with regard to the intrinsic safety.
- The connector K3 shall not be used in hazardous area.
- Only temperature or pressure sensor defined in the manufacturer's technical file can be used.



# Annex 00 to Certificate IECEX LCIE 16.0003X issue 00



## 1. Marking:

Elster GmbH

Address: ...

Type: EK205

Serial number: ...

Year of construction: ...

Ex ia IIC T4 Ga

Tamb: -40°C to +60°C

IECEX LCIE 16.0003X

WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

WARNING – USE ONLY ELSTER N°73015774, N°73020663 or N°73023226 BATTERY

Ui: ..., li: ..., Pi: ..., Ci: ..., Li: ... (\*)

Uo: ..., Io: ..., Po: ..., Co: ..., Lo: ... (\*)

(\*): completed by intrinsic safety parameters in ratings.

## 2. Ratings:

Batteries used within the equipment:

- Elster N°73015774, rated voltage = 3.6 V, rated capacity = 16.5 Ah.

- Elster N°73020663, rated voltage = 3.6 V, rated capacity = 19 Ah.

- Elster N°73023226, rated voltage = 3.6 V, rated capacity = 19 Ah.

Intrinsic safety parameters:

Terminal	Intrinsic safety parameters				
Uext, DA1, DA2, DTR/T+, TXD/T-, RXD/R-, DCD/R+, RING	$U_i$ : 25 V	$I_{i\Sigma}$ : 144 mA	$P_{i\Sigma}$ : 500 mW	$C_i$ : 0	$L_i$ : 0
DE1	$U_o$ : 6.6 V	$I_o$ : 0.66 mA	$P_o$ : 1.1 mW	$C_o$ : 22 $\mu$ F	$L_o$ : 81624 mH
DE2	$U_o$ : 6.6 V	$I_o$ : 7.34 mA	$P_o$ : 12.2 mW	$C_o$ : 22 $\mu$ F	$L_o$ : 660 mH