



# 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.: IECEx IBE 13.0039 Issue No: 0 Certificate history:  
Issue No. 0 (2014-04-29)

Status: Current Page 1 of 3

Date of Issue: 2014-04-29

Applicant: Grünewald GmbH  
Oberallener Weg 7  
59069 Hamm  
Germany

Electrical Apparatus: Universal measuring instrument for pressure or temperature type SIMPL-Ex  
*Optional accessory:*

Type of Protection: Intrincic safety 'ia'

Marking: Ex ia I Ma

Approved for issue on behalf of the IECEx  
Certification Body:

Prof. Dr. Tammo Redeker

Position:

Head of Certification Body

Signature:  
(for printed version)

Date:

2014-04-29

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:

IBExU Institut für Sicherheitstechnik GmbH  
Certification Body  
Fuchsmühlenweg 7  
09599 Freiberg  
Germany



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Manufacturer: **Grünwald GmbH**  
Oberallener Weg 7  
59069 Hamm  
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:

[DE/IBE/ExTR13.0036/00](#)

Quality Assessment Report:

[DE/BVS/QAR08.0004/02](#)



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## Schedule

### EQUIPMENT:

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

The universal measuring device type SIMPL-Ex is an uniformed standardised device for pressure or temperature measuring. The devices are made to withstand very hard and rough environmental conditions. Because of their very solid construction they are able to withstand very high mechanical load.

The mechanical fitting can be optionally be fitted with a thread, flange or a coupling connector or wire connection in various length.

For the subsequent measuring value transmission there are two different output signals - current and voltage in different ranges.

### Technical data:

Nominal voltage	12 VDC +15%/-20% U =14 VDC 16 VDC +0%/-30% U <sub>i</sub> =16.1 VDC i
Nominal current	34 mA (incl. 20 mA output) 14 mA (without 20 mA output)
output signal	0-10 V active output 0/4-20 mA active output
Ambient temperature range	-50 °C up to +100 °C
Media temperature	-100 °C up to +200 °C
degree of protection (acc. IEC 60529)	IP64 / IP68

CONDITIONS OF CERTIFICATION: NO



### Technical Data

Ambient temperature range: -50 °C to +100 °C  
Degree of protection: IP64 / IP68

#### Electrical Data

**Supply electric circuit:** in type of protection Intrinsic safety Ex ia I  
 $U_i$  14 V or 16.1 V  
 $C_i$  negligible  
 $L_i$  negligible

**Signal circuit (current output)** in type of protection Intrinsic safety Ex ia I  
 $U_o \leq U_i$   
 $I_o$  120 mA  
 $C_o$  1.6  $\mu$ F  
 $L_o$  26 mH

Linear characteristic:  $R_i = 96 \Omega$

**Signal circuit (voltage output)** in type of protection Intrinsic safety Ex ia I  
 $U_o$  12.7 V  
 $I_o$  12 mA  
 $C_o$  3  $\mu$ F  
 $L_o$  100 mH

Linear characteristic:  $R_i = 1102 \Omega$

The intrinsically safe circuits are galvanically connected.