



# 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 PTB 08.0036

Issue No: 1

Certificate history:

Status: **Current**

Issue No. 1 (2019-07-03)

Issue No. 0 (2008-08-26)

Date of Issue: **2019-07-03**

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Applicant: **SAMSON AG Mess- und Regeltechnik**  
Weismüllerstr. 3  
60314 Frankfurt am Main  
Germany

Equipment: **Solenoid Valve Type 3967-112...**

Optional accessory:

Type of Protection: **Intrinsic Safety "I"**

Marking:

Ex ia IIC T6...T4 Gb and

Ex ia IIIC T80 °C Db

Approved for issue on behalf of the IECEx  
Certification Body:


Dr.-Ing. Detlev Markus

Position:

Head of Department "Explosion Protection in Energy Technology"

Signature:  
(for printed version)

Date:

  
03.07.19

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:

**Physikalisch-Technische Bundesanstalt (PTB)**  
Bundesallee 100  
38116 Braunschweig  
Germany





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Manufacturer: **SAMSON AG Mess- und Regeltechnik**  
Weismüllerstr. 3  
60314 Frankfurt am Main  
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 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/PTB/ExTR08.0045/00](#)

[DE/PTB/ExTR08.0045/01](#)

Quality Assessment Report:

[DE/TUN/QAR06.0011/08](#)



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## Schedule

### EQUIPMENT:

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

The solenoid valve, type 3967-112..., transforms binary electric signals into pneumatic output signals; it is used for controlling pneumatic actuators.

The solenoid valve is electrically controlled with the e/p binary converter coil, type 1079-40... It is a passive two-terminal element that can be integrated into certified intrinsically safe circuits, provided the maximum values for  $U_i$ ,  $I_i$  and  $P_i$  are not exceeded.

It is used in potentially explosive atmospheres.

For the thermal and electrical values reference is made to the annex.

**SPECIFIC CONDITIONS OF USE: NO**





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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

The modifications concern the applied standards, the elimination of dust explosion protection by enclosure "t", the adding of dust explosion protection by Intrinsic Safety, the permissible ambient temperature range for group IIIC, the electrical data and the marking.  
The product has not been subjected to any technical modifications.



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**Additional information:**

**Annex:**

Annex IECEx PTB 08.0036-01.pdf



Applicant:

**SAMSON AG Mess- und Regeltechnik**

Weismüllerstraße 3, 60019 Frankfurt, Germany

Electrical Apparatus:

**Solenoid Valve, Type 3967-112...**

Thermal and electrical data

Unlike the other versions, the version with a 6 V nominal signal has a defined maximum intrinsically safe input power  $P_i$ .

Signal circuit..... Type of protection Intrinsic Safety  
(terminals +, -) Ex ia IIC / IIIC

Only for connection to a certified intrinsically safe circuit

Maximum values:

for variant of nominal signal 6 V

$U_i = 32 \text{ V}$   
 $I_i = 150 \text{ mA}$   
 $P_i = 250 \text{ mW}$   
 $L_i$  negligibly low  
 $C_i$  negligibly low

for all other versions (nominal signal 12 V and 24 V)

$U_i = 32 \text{ V}$   
 $I_i = 150 \text{ mA}$   
 $L_i$  negligibly low  
 $C_i$  negligibly low





For the relationship between temperature class and the permissible ambient temperatures for gas group IIC, reference is made to the following table:

Temperature class	Ambient temperatures
T6	-45 °C to +60 °C
T5	-45 °C to +70 °C
T4	-45 °C to +80 °C

The range of the permissible ambient temperatures for dust group IIIC is -45 °C to +60 °C