



# 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 14.0049X Issue No: 0 Certificate history:  
Issue No. 0 (2014-12-16)

Status: **Current** Page 1 of 4

Date of Issue: **2014-12-16**

Applicant: **Bürkert Werke GmbH**  
Christian-Bürkert-Straße 13-17  
74653 Ingelfingen  
**Germany**

Electrical Apparatus: **solenoid coil**  
*Optional accessory:* *type AC10*

Type of Protection: **encapsulation**

Marking:  
Ex mb IIC T4, T5, T6, Gb  
Ex mb IIIC T80°C, T95°C, T130°C Db

Approved for issue on behalf of the IECEx  
Certification Body:

Dr. Ing. U. Johannsmeyer

Position:

Head of department "Explosion Protection in Sensor Technology and  
Instrumentation"

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:

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





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Certificate No: IECEx PTB 14.0049X Issue No: 0  
Date of Issue: 2014-12-16 Page 2 of 4  
Manufacturer: **Bürkert Werke GmbH**  
Landauer Straße 24  
74582 Gerabronn  
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 60079-18 : 2009** Explosive atmospheres Part 18: Equipment protection by encapsulation "m"  
Edition:3

*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/ExTR14.0064/00](#)

Quality Assessment Report:

[DE/PTB/QAR07.0002/05](#)



# IECEx Certificate of Conformity

Certificate No: IECEx PTB 14.0049X

Issue No: 0

Date of Issue: 2014-12-16

Page 3 of 4

## Schedule

### EQUIPMENT:

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

The solenoid of type AC10 is used for the actuation of valves controlling gaseous or liquid media. The solenoids are designed as single-acting levitation magnets. The equipment is applicable as an electrical apparatus in areas with flammable gases or combustible dusts.

The solenoid is always mounted onto the core guide tube of the armature and fixed by means of a nut. The armature itself is a closed system also without the solenoid. The armature's fluid space is separated from the solenoid by its core guide tube.

#### Type code:

Solenoid, type AC10-U3-

The diagram shows a type code structure with three main components: 'x-PXxx' at the top, 'variant (VAR)' in the middle, and 'coilsize (SG)' at the bottom. Each component is represented by a grey rectangular box with a white text label. The boxes are arranged in a descending staircase pattern from left to right.

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

1. A fuse corresponding to the rated current of the magnet (max. 3 x IB according to IEC 60127) shall be connected in series to each solenoid as short-circuit protection. The rated voltage of the fuse shall be the same as or higher than the maximum value of the nominal voltage (UN + 10%) specified for the magnet. The breaking capacity of the fuse link shall be the same as or higher than the maximum short-circuit current expected to occur at the place of installation (usually 1500 A)
2. If types of different power are used for the solenoids intended for block mounting, the technical data of the type with the highest power shall apply with respect to the specification of the temperature class. In this case the maximum permissible ambient temperature is +40°C
3. The valve body shall comply with the following requirements as a minimum:

Material: Metal (brass, aluminum, stainless steel) or Polyimide

Minimum dimensions: 32 mm x 32 mm x 10 mm



# IECEx Certificate of Conformity

Certificate No: IECEx PTB 14.0049X

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Page 4 of 4

**EQUIPMENT (continued):**

**Electrical Data**

VAR	SG	$U_N / V$	$P_N / W$	$I_B / mA$	$P_G / W$	$T_{amb} / ^\circ C$	temperature class	mounting
PX22	5	12 ... 240	7.0	620 ... 30	6.3	-40 ... 60	T4, T130°C	single
PX23	6	12 ... 240	9.0	790 ... 30	8.0	-40 ... 60	T4, T130°C	single
PX24	5	12 ... 240	7.0	620 ... 30	6.3	-40 ... 40	T4, T130°C	block
PX25	5	12 ... 240	3.0	250 ... 10	3.0	-40 ... 40	T6, T80°C	single
PX26	6	12 ... 240	1.8	160 ... 10	1.9	-40 ... 60	T6, T80°C	single
PX27	5	12 ... 240	2.25	200 ... 10	2.4	-40 ... 50	T6, T80°C	single
PX28	5	12 ... 240	2.25	200 ... 10	2.3	-40 ... 40	T6, T80°C	block
PX29	5	12 ... 240	3.0	240 ... 12	2.8	-40 ... 60	T5, T95°C	single
PX30	5	12 ... 240	3.0	240 ... 12	2.9	-40 ... 50	T5, T95°C	Block
PX31	5	12 ... 240	3.0	250 ... 10	3.0	-40 ... 80	T4, T130°C	single

$U_N$  Nominal voltage (permissible voltage tolerance  $\pm 10\%$ )

$P_N$  Nominal power

$I_B$  Rated current

$P_G$  Limit power

$T_{amb}$  permissible ambient temperature