



(1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**



(3) EC-type-examination Certificate Number:

PTB 14 ATEX 2023 X

(4) Equipment: Solenoid, type AC10

(5) Manufacturer: Bürkert Werke GmbH

(6) Address: Christian-Bürkert-Str. 13-17, 74653 Ingelfingen, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report PTB Ex 14-24124.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012

EN 60079-18:2009

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

 **II 2 G Ex mb IIC T4,T5,T6 Gb**
II 2 D Ex mb IIIC T80 °C, T95 °C, T130 °C Db

Konformitätsbewertungsstelle Sektor Explosionsschutz Braunschweig, December 10, 2014
On behalf of PTB:


Dr.-Ing. U. Johannsmeyer
Direktor und Professor



(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 14 ATEX 2023 X

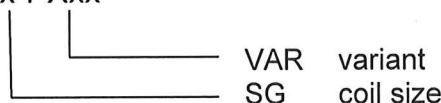
(15) Description of equipment

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-x-PXxx



Electrical data:

VAR	SG	$\frac{U_N}{V}$	$\frac{P_N}{W}$	$\frac{I_B}{mA}$	$\frac{P_G}{W}$	$\frac{T_{amb}}{^\circ C}$	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

(16) Test report PTB Ex14-24124

(17) Special conditions for safe use

1. A fuse corresponding to the rated current of the magnet (max. $3 \times I_B$ 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 ($U_N + 10\%$) 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 $+40\text{ }^\circ\text{C}$.
3. The valve body shall comply with the following requirements as a minimum:

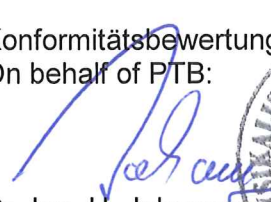
Material:	Metal (brass, aluminum, stainless steel) or Polyimide
Minimum dimensions:	32 mm x 32 mm x 10 mm

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, December 10, 2014


Dr.-Ing. U. Johannsmeyer
Direktor und Professor



1 SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 14 ATEX 2023

(Translation)

Equipment: Solenoid, type AC10

Marking:  II 2 G Ex mb IIC T4,T5,T6 Gb
II 2 D Ex mb IIIC T 80°C, 95 °C, 130 °C Db

Manufacturer: Bürkert Werke GmbH

Address: Christian-Bürkert-Str. 13-17
74653 Ingelfingen, Germany

Description of supplements and modifications

The variety of the used casting compounds and of the used type plate material are each supplemented by a new material.

All further specifications of the EC-type examination certificate apply without changes.

Applied standards

EN 60079-0:2012 + A11:2013, EN 60079-18:2015

Test report: PTB Ex 15-25147

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB

Braunschweig, April 19, 2016

Dr.-Ing. F. Lienesch
Regierungsdirektor



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EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.