



## (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 10 ATEX 2003 X**



(4) Equipment: Valve solenoid type 984x.xxxxx

(5) Manufacturer: Buschjost GmbH

(6) Address: Detmolder Straße 256  
32545 Bad Oeynhausen, 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 assessment and test report PTB Ex 10-20015.

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

**EN 60079-0:2006, EN 60079-18:2004, EN 61241-0:2006, EN 61241-1:2004**

(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 II T4 and II 2 D Ex tD A21 IP 65 T130°C**

Zertifizierungssektor Explosionsschutz

Braunschweig, April 27, 2010

By order:

  
Dr.-Ing. U. Johannsmeyer  
Direktor und Professor



(13)

## SCHEDULE

(14)

### EC-TYPE-EXAMINATION CERTIFICATE PTB 10 ATEX 2003 X

(15) Description of equipment

The valve solenoid type 984x.xxxxx consists of a solenoid, an armature system and a fixing nut. The armature guide forms the flameproof part of the magnet, the guide tube is tested with 1.5 times the nominal operating pressure. Depending on its design, the guide tube is suitable for thread mounting or flange mounting. The winding consists of enamel-insulated copper wires of insulation class H. This coil is injection-moulded with pre-plastified plastic granules. A PCB with electronic components is soldered onto the terminal posts of the encapsulated part of the coil. A housing made of fibre-reinforced polyimide 6 is mounted over the terminal area and then sealed with compound.

#### Electrical data

Type of current	Direct current
Rated voltage	6 V ... 220 V
Rated current	1.58 A ... 0.043 A
Limit power	10.1 W
Max. perm. ambient temperature	50 °C
Temperature class	T4
Medium temperature	80 °C
Single mounting	yes
Butt mounting	yes, wall to wall
Type of current	Alternating current
Rated voltage	12 V ... 240 V
Rated current	0.623 A ... 0.039 A
Limit power	9.2 W
Max. perm. ambient temperature	50 °C
Temperature class	T4
Frequency	50 Hz ... 60 Hz
Medium temperature	80 °C
Single mounting	yes
Butt mounting	yes, wall to wall

(16) Assessment and test report PTB Ex 10-20015



# Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

## SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 10 ATEX 2003 X

(17) Special conditions for safe use

A fuse corresponding to the rated current of the magnet (max.  $3 \times I_B$  according to IEC 60127-2-1) or a motor protecting switch with short-circuit- or thermal instantaneous tripping (adjusted to rated current) must be connected in series to each magnet. For very low rated currents of the magnet the fuse with the lowest current value according to the aforementioned IEC-standard will be sufficient. This fuse may be accommodated inside the associated power supply unit or has to be connected in series separately. The rated voltage of the fuse shall be the same as or higher than the rated voltage 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 (normally 1500 A).

A maximum permissible ripple of 20 % applies to all magnets of DC-design.

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungssektor Explosionsschutz  
By order:

Braunschweig, April 27, 2010



Dr.-Ing. U. Johannsmeyer  
Direktor und Professor

## 1. SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 10 ATEX 2003 X

(Translation)

Equipment: valve solenoid, type 984x.xxxxx

Marking:  II 2 G Ex mb II T4 und II 2 D Ex tD A21 IP 65 T130 °C

Manufacturer: Buschjost GmbH

Address: Detmolder Straße 256, 32545 Bad Oeynhausen, Germany

### Description of supplements and modifications

In the future the valve solenoid type 984x.xxxxx shall be marked as follows:

 II 2 G Ex mb IIC T4

 II 2 D Ex mb tb IIIC T130 °C

or

 II 2 G Ex mb IIC T4 Gb

 II 2 D Ex mb tb IIIC T130 °C Db

All other specifications of the EC-Type Examination Certificate apply without changes.

### Applied standards

**EN 60079-0:2009, EN 60079-18:2009, EN 60079-31:2009**

Test report: PTB Ex 13-22400

Zertifizierungssektor Explosionsschutz

On behalf of PTB

  
Dr.-Ing. T. Horn



Braunschweig, February 4, 2013

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