



## (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 2013 X**

(4) Equipment: Magnet, type K05980..

(5) Manufacturer: GSR Ventiltechnik GmbH & Co. KG

(6) Address: Im Meisenfeld 1, 32602 Vlotho, 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 10-29406.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with: **EN 60079-0:2006, EN 60079-7:2007, 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 e mb II T4

II 2 D Ex tD A21 IP 65 T130 °C

Zertifizierungssektor Explosionsschutz  
On behalf of PTB:

Braunschweig, September 14, 2010

Dr.-Ing. U. Johannsmeyer  
Direktor und Professor



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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.

(13)

## SCHEDULE

(14)

### EC-TYPE-EXAMINATION CERTIFICATE PTB 10 ATEX 2013 X

(15) Description of equipment

The magnet system consists of of valve magnets with core tubes. A circuit board carrying a bridge-type rectifier is installed in the terminal box. The coils and the rectifier board are completely encapsulated. The core tube and the electromagnet are always mounted and operated together on the valve body.

The maximum permissible ambient temperature range for temperature class T4 is -55 °C up to +60 °C.

#### Electrical data

Type of current	Universal current
Frequency	0 up to 60 Hz for AC-operation
Nominal voltage	12 V up to 230 V
Rated current	2 A down to 0.11 A
Limit power	18 W
Single mounting	yes
Butt mounting	no

(16) Assessment and test report

PTB Ex 10-29406

(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) shall 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 ( $U_{Nenn} + 10\%$ ) 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 (normally 1500 A).

# Physikalisch-Technische Bundesanstalt

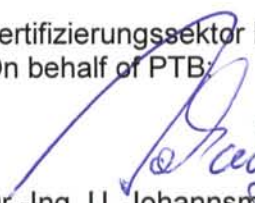
Braunschweig und Berlin

SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 10 ATEX 2013 X

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

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