



(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 05 ATEX 2023 X

(4) Equipment: Magnets, type series K05927..-KL.

(5) Manufacturer: GSR Ventiltechnik GmbH 6 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 report PTB Ex 05-25021.

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

EN 50014:1997 + A1 + A2

EN 50019:2000

EN 60079-18:2004

EN 50281-1-1:1999

(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.

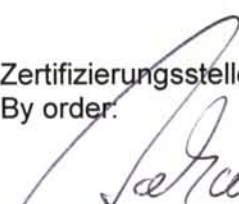
(12) The marking of the equipment shall include the following:

 **II 2G EEx e mb II T4 and**

 **II 2D IP65 T 130 °C**

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, June 15, 2005


Dr.-Ing. U. Johannsmeyer
Direktor und Professor



SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2023 X**

(15) Description of equipment

The magnet system consists of valve magnets with keeper sleeves. All variants are equipped with a circuit board for a bridge-type rectifier located in the terminal box. The coils and the rectifier board are completely potted. Keeper sleeve and electromagnet are always mounted and operated together on the valve body.

Electrical data

| | |
|--------------------------------------|-------------------|
| Type designation | K05927..-KL. |
| Type of current | universal current |
| Nominal voltage | 24 V ... 230 V |
| Rated current | 2.1 A ... 0.22 A |
| Limit power | 43.2 W |
| Max. permissible ambient temperature | 70 °C |
| Temperature class | T4 |
| Frequency | 0 Hz ... 60 Hz |
| Medium temperature | 70 °C |
| Single mounting | yes |
| Butt mounting | no |

(16) Test report PTB Ex 05-25021

(17) Special conditions for safe use

1. A fuse corresponding to its rated current (max. $3 \cdot I_{\text{rat}}$ according IEC 60127-2-1) or a motor protecting switch with short-circuit and thermal instantaneous tripping (set to rated current) shall be connected in series to each solenoid as short circuit protection. For very low rated currents of the solenoid the fuse of lowest current value according to the indicated IEC standard will be sufficient. The fuse may be accommodated in the associated supply unit or shall be separately arranged. The rated voltage of the fuse shall be as high as, or higher than the stated rated voltage of the magnet coil. The breaking capacity of the fuse-link shall be as high as, or higher than the maximum expected short circuit current at the location of the installation (usually 1500 A).
2. The maximum permissible ambient temperature range is -40 °C up to +70 °C.
3. Since temperatures higher than 70 °C occur at the cable entry of the magnets or higher than 80 °C at the strand junction, the apparatus shall be marked additionally with the higher temperature (information label at the cable entry). In this case, a heat-proof connecting cable shall be used only.

sheet 2/3

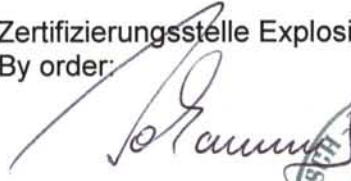
4. When using a connecting line made of silicon (resp. which contains silicon) or a cable which is not scratch-proof, this shall be protected against mechanical damage (e.g. interrupted conduit system with edge protectors).

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

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