

# **MAGNETSCHULTZ**



SPEZIALFABRIK FÜR ELEKTROMAGNETISCHE APPARATE

Magnet-Schultz GmbH & Co. KG · Postfach 16 65 · D-87686 Memmingen · Algäuer Straße D-87700 Memmingen  
Telefon 08331 / 10 4 - 0      Telefax 08331 / 10 43 33      [www.magnet-schultz.de](http://www.magnet-schultz.de)

***Operating Manual***

***BA022.1002***

791201

Revised: 19<sup>th</sup> August 2005

***Valve Solenoid***

***GBXE 022 AIA D03***

FESTO Part Number 693286 / 0504NH



## Operating Manual BA 022.1002

Revised: 19<sup>th</sup> August 2005

### Also valid Documents


EC Test Examination Certificate

PTB 03 ATEX 2097

Drawing. G012159

### Main Characteristics and regulated Operation

The applications engineering and the operation of the valve solenoid have to be according to the common rules of engineering and to the particular regulations and laws. For the construction of electric systems above ground in the potentially explosive area by gasses, the DIN EN 60079-14 is generally valid and in the potentially explosive area by dust the DIN EN 50281-1-2.

The valve solenoid GBXE022AIAD03, consisting of magnetic body and armature tube \*\* FPC, in type EEx ia IIC T6, is used as an actor in the pneumatics. To ensure a perfect, safe function and a long service life, the instructions of this operating manual have to be noticed and the technical data as per this operating manual and the device labelling have to be adhered to.

Unintended operations or not allowed impairments have to be prevented by appropriate measures.


The valve solenoid will be delivered without terminal socket. To limit the disconnect-overvoltage internal rectifier diodes are switched parallel to the magnetic coil.

### Ambient Conditions

If used in a potentially explosive area the device-labelling and the operating manual have to be noticed.

### Installation and Initiation

These operations need only to be done by an electrician with adequate qualifications. The electrical connection is via a permitted device socket with mounting screw.

According to the technical data the initiation is only allowed in connection with the accessory armature tube \*\* FPC in mounted condition on the prescribed valve unit.

Derivation of sensible heat need not to be reduced by overpainting or covering the device finish.

**ATTENTION!:** Before working on electrical circuits and before opening the connector within the potentially explosive area, the electric circuits have to be switched without voltage / power.

Only the appropriate and permitted tools and measuring instruments need to be used in the potentially explosive area.

In the case of a disturbance the correct function of the cable connections and the power-supply has to be examined in the non-potentially explosive working-area.

Changes or repairs of the magnetic body and tube are not allowed.

### Maintenance






The valve solenoid has not to be maintained if applied correctly according to the operating manual.



# Operating Manual BA 022.1002

Revised: 19<sup>th</sup> August 2005

## Technical Data

Manufacturer	Magnet-Schultz GmbH & Co. KG D-87700 Memmingen <a href="http://www.magnet-schultz.de">www.magnet-schultz.de</a>
valve solenoid – type	GBXE 022 AIA D03
knurled nut / spring washer	MSM 231743 / MSM 631109
armature tube (not in the consignment)	**  FPC ( ** date of production two-digit, according to DIN EN 60062 pt. 5.1 )
resistance $R_{20}$	160 Ohm
maximum input voltage $U_i$	48 V
maximum input current $I_i$	0,487 A
maximum input power $P_i$	1,46 W
supply	only of intrinsic-safe electrical circuits
necessary current consumption for the armature tube **  FPC	corresponding valve adjustment min. 0.043 A
ambient temperature $T_a$	-20 °C to +40 °C
with the function of the armature tube **  FPC	in accordance with the specification of the armature tube within above temperature range
single assembly on plastic- or aluminium valve	greater than/equal to 17mm x 25mm x 25mm
manifold assembly on aluminium- or single valve distance wall to wall row distance	greater than/equal to 20mm x 25mm x 83mm greater than/equal to 1mm greater than/equal to 8mm
device plug DIN EN 175301-803	for CECC 75 301- 803- B002F.- ..... .
protection system DIN VDE 0470 / EN 60529 respect. IEC 60529	IP65 mounted, with corresponding device socket
protection class DIN VDE 0580	I
explosion protection EC-Directive 94/9/EC	 0123  II 2 G EEx ia IIC T6 II 2 D Ex iaD IP65 T 80°C
EC Test Examination Certificate	PTB 03 ATEX 2097



# Operating Manual BA 022.1002

Revised: 19<sup>th</sup> August 2005

## Mounting

Mount armature tube with round seal on valve unit and tighten with prescribed torque according to the mounting drawing.

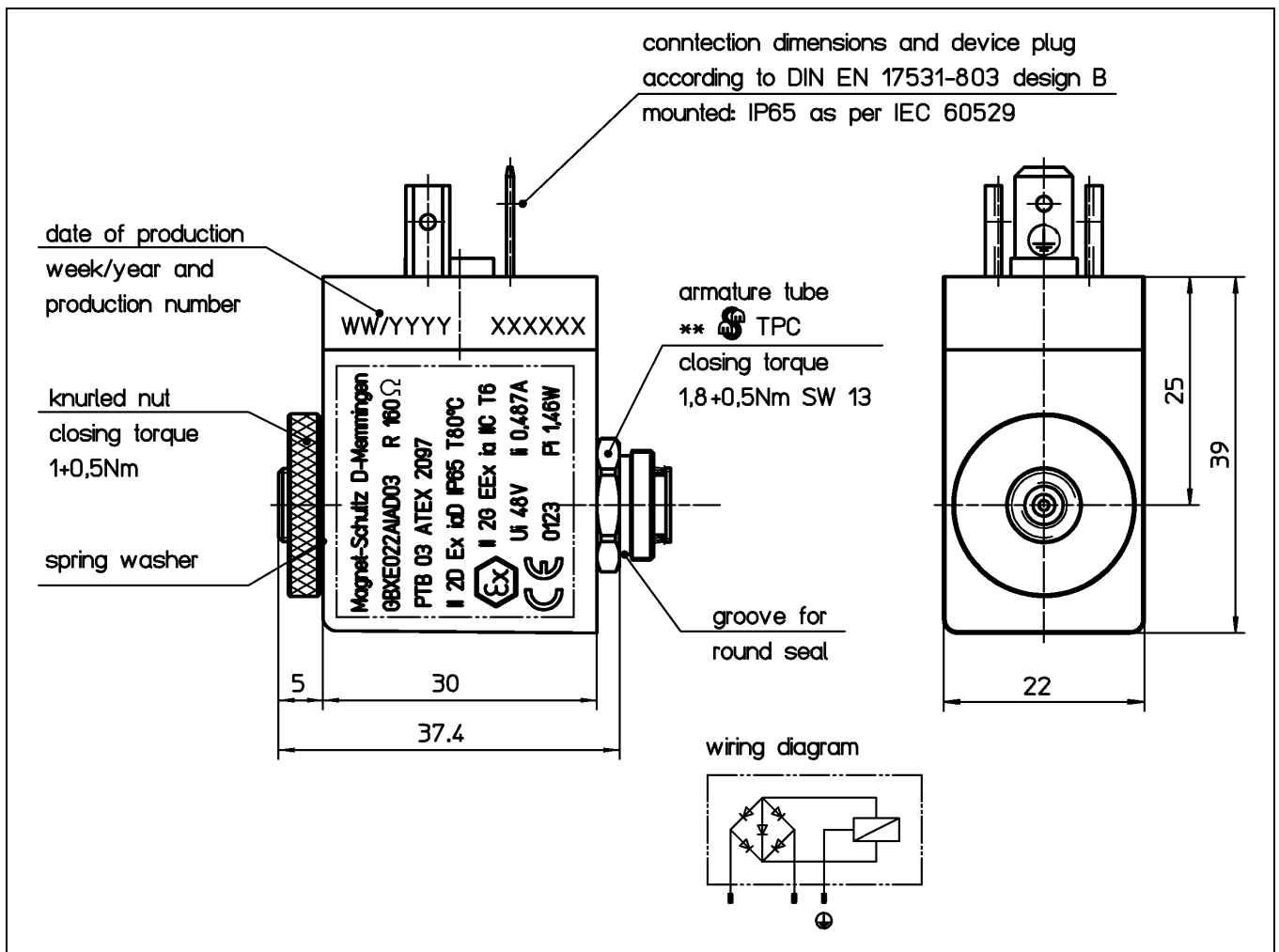
Put the magnetic body on the armature tube \*\* FPC in correspondence with the mounting drawing, insert spring washer and tighten knurled nut with prescribed torque as per the mounting drawing.

Put on the already installed device socket (according to IEC 60079-14) without voltage and tighten the accessory mounting screw. Protection system IP65 as per IEC 60529 is to be adhered to.

Dimensions of the round seal for the armature tube:

e.g. diameter 10,2mm x 1mm 70 Shore ( elastomers )

## Mounting Drawing



## Materials and Finishes

iron, blank and phosphatized

stainless steel, blank

brass, blank and tinned

copper wire, blank and tinned

copper enamel wire

elastomers

epoxy resins

duroplastics

thermoplastics