

MAGNET-SCHULTZ



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

Operating Manual

BA022.3001

791216

Revised: 19th August 2005

Valve Solenoid

GBRE 022 AMX E05

GBRE 022 AMX E07

FESTO Part Number 693285 / 0504NH



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Also valid Documents


EC Test Examination Certificate

PTB 03 ATEX 2098 X

Drawings: G012161, G012163

Main Characteristics and regulated Operation

The application 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 GBRE022AMXE05 or, respectively, GBRE022AMXE07, in connection with armature tube **  FPB, 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 magnetic body will be delivered with a non-releasable connecting cable. To limit the disconnect-overvoltage an internal diode is 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.

Installations and Initiation

These operations need only to be done by an electrician with adequate qualifications. The electrical connection may be via the connection cable outside the potentially explosive area or via an ex-certificated terminal box within the potentially explosive area.

A connection to earth outside the magnetic housing is provided for the equipotential bonding.

According to the technical data the initiation is only allowed in connection with the accessory tube 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 terminal box 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 have 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.



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Technical Data


Manufacturer	Magnet-Schultz GmbH & Co. KG D-87700 Memmingen www.magnet-schultz.de	
valve solenoid – type	GBRE 022 AMX E05 or, respect., GBRE 022 AMX E07	
assembly	variation V	
knurled nut / spring washer	MSM 231743 / MSM 631109	
armature tube (not in the consignment)	** FPB (** date of production two-digit, according to DIN EN 60062 pt. 5.1)	
rated voltage $\pm 10\%$	U_N	24 V DC
ripple	w	max. 20%
rating current	I_B	0.190 A
limiting power	P_G	4.3 W
temperature class	T5	
ambient temperature	T_a	-20 °C to +40 °C
with the function of the armature tube	in accordance with the specification of the armature tube within above temperature range	
surface temperature	95 °C	
single assembly on aluminium valve	greater than/equal to 25mm x 25mm x 17mm	
or with mounting plate of Fe and plastic valve	greater than/equal to 27mm x 29mm x 2mm greater than/equal to 32mm x 32mm x 22mm	
manifold assembly with aluminium- or plastic valve on aluminium-single valve with aluminium-manifold-strip distance wall to wall	greater than/equal to 45mm x 26mm x 83mm cross section: greater than/equal to 32mm x 20mm greater than/equal to 5mm	
connection cable	Type 4 GMH 4 G – J 3x0.75mm ² or H05 GG – F3G 0.75mm ²	
limitation of disconnect-overvoltage (internal)	max. 90 V (bi-directional-diode)	
short circuit protection	A fuse corresponding to its rating current (max. 3 x I_B according to DIN 41571 or IEC 127) or, respectively, a motor-protection-switch with short circuit and thermal rapid release (corresponding rating current) have to be connected in series to each valve solenoid.	
earth connection	up to 4 mm ²	
protection system DIN VDE 0470 / EN 60529 respect. IEC 60529	IP65	
protection class DIN VDE 0580	I	
explosion protection RL 94/9/EG (ATEX 95)	0123 II 2 G EEx m II T5 II 2 D IP65 T 95°C	
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Mounting

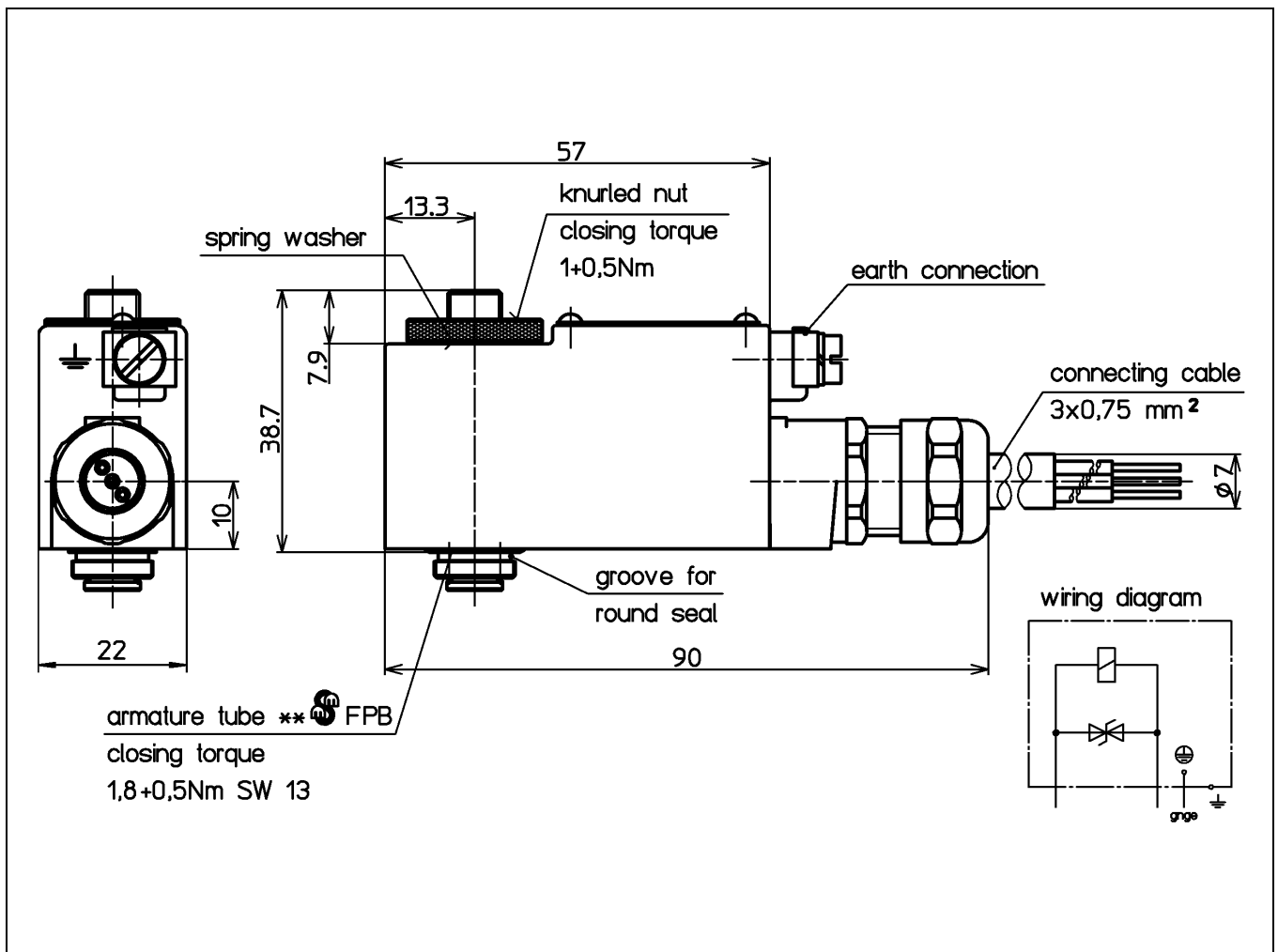
Mount armature tube ** FPB with round seal on valve unit and tighten with prescribed torque according to the mounting drawing.

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

Dimensions of the round seal for the armature tube:

e.g. diameter 10.2mm x 1mm 70 Shore (elastomers)

Mounting Drawing



Materials and Finishes

aluminium, blank and anodised

iron, Zn-coated

stainless steel, blank

brass, blank

copper enamel wire

copper wire, blank and tinned

epoxy resins

thermoplastics

elastomers