

DC or AC Valve Solenoid in intrinsically safe version ATEX

3

Product group

G BX E 022 AIA A01


- According to DIN VDE 0580
- Armature space pressure-tight up to max. 50 bar static pressure
Nominal operating pressure 10 bar
- Armature with spring-supported sealing nipples at both ends
- Insulation materials of excitation winding correspond to thermal class F.
- Electrical connection and protection class with duly executed installation:
 - Protection class
⊕ II 2G Ex ia IIC T6 - ⊕ II 2D Ex iaD 21 IP65 T80°C
- Fastening via central thread
- Sealing between solenoid and valve with o-ring
- Easy exchange of the magnetic body without opening the pneumatic circuit
- Please contact us for modifications and special designs
- Application examples:
Actuation of 3/2-way-seat-valves,
especially for pneumatic application and other gasiform and fluid neutral media



Fig. 1: Type G BX E 022 AIA A01




Technical data

G BX E 022 AIA A01		
Max. input voltage	U_i	48 V
Max. input current	I_i	0,487 A
Max. input power	P_i	1,46 W
Supply		Only from intrinsically safe current circuits (see example*)
Rel. duty cycle ED		100%
Required current consumption		min. 0,057 A
Temperature class		T6
Ambient temperature	T_a	-20°C to +40°C
For the function of the armature tube		According to specification armature tube within the above temperature ranges
Single assembly On plastic or aluminium valve		≥ 17 mm x 25 mm x 25 mm
Battery assembly On aluminium single valve Distance from wall to wall Distance between rows		≥ 20 mm x 25 mm x 83 mm ≥ 1 mm ≥ 8 mm
Connector plug		According to EN 175301-803
Suitable cable plug (not included in delivery)		EN 175301-803-B002F-.....- (installed according to IEC/EN 60079-14)
Stroke	s	0,3 mm
Nominal width	NW	∅1,1 mm
Nominal pressure	P_N	10 bar
Valve function		3/2 ways NC
Explosion protection RL 94/9/EG (ATEX 95)		 II 2G Ex ia IIC T6 II 2D Ex iaD 21 IP65 T80°C
EC type examination certificate		PTB 03 ATEX 2097
Protection type according to IEC/EN 60529		IP65 Mounted, with respective cable plug
Protection class according to DIN VDE 0580		I

The pneumatic activity values given in the datasheet refer to the necessary current draw given in the chart.

We recommend using compressed air corresponding to DIN ISO 8573/1, class 3. Elastomer neutral oils should be used for lubricating the compressed air, otherwise we ask you to please contact the manufacturer.

This part list is a document for technically qualified personnel. The present publication is for informational purposes only and shall not be construed as mandatory illustration of the products unless otherwise confirmed expressively

Please make sure that the described devices are suitable for your application. Supplementary information concerning its duly assembly can be found also in the  -Technical Explanation, in the effective DIN VDE 0580 as well as in the relevant specifications.

Information and remarks concerning European directives can be taken from the correspondent information sheet which is available under *Produktinfo.Magnet-Schultz.com* abrufbar ist.

Note on the RoHS Directive

According to our current state of knowledge the devices pictured in this document do not contain any substances in concentration values or applications for which putting into circulation with products manufactured from them is prohibited in accordance to RoHS.

*example(for intrinsically safe current circuits)

U_N V	R_{20} Ohm	R_{Tol} %	I_{20} A	P_{20} W	I_{pr} A	Power supply	Manufacturer
24	160	±8	0,064	0,65	0,06	Type KFD2-SD-EX 1.36 Output: E Ex ia II B	Company Pepperl & Fuchs
24	160	±8	0,086	1,18	0,080	Zener barrier type Z 779 [E Ex ia] II C Channel 1, 2 parallel, use only for II B	
24	160	±8	0,06	0,58	0,06	Type MTL 5022 Zone 0, II B, T4-6	Company MTL

Constructive data

Dimensions for connecting and connector plug according to DIN EN 175301-803, design B

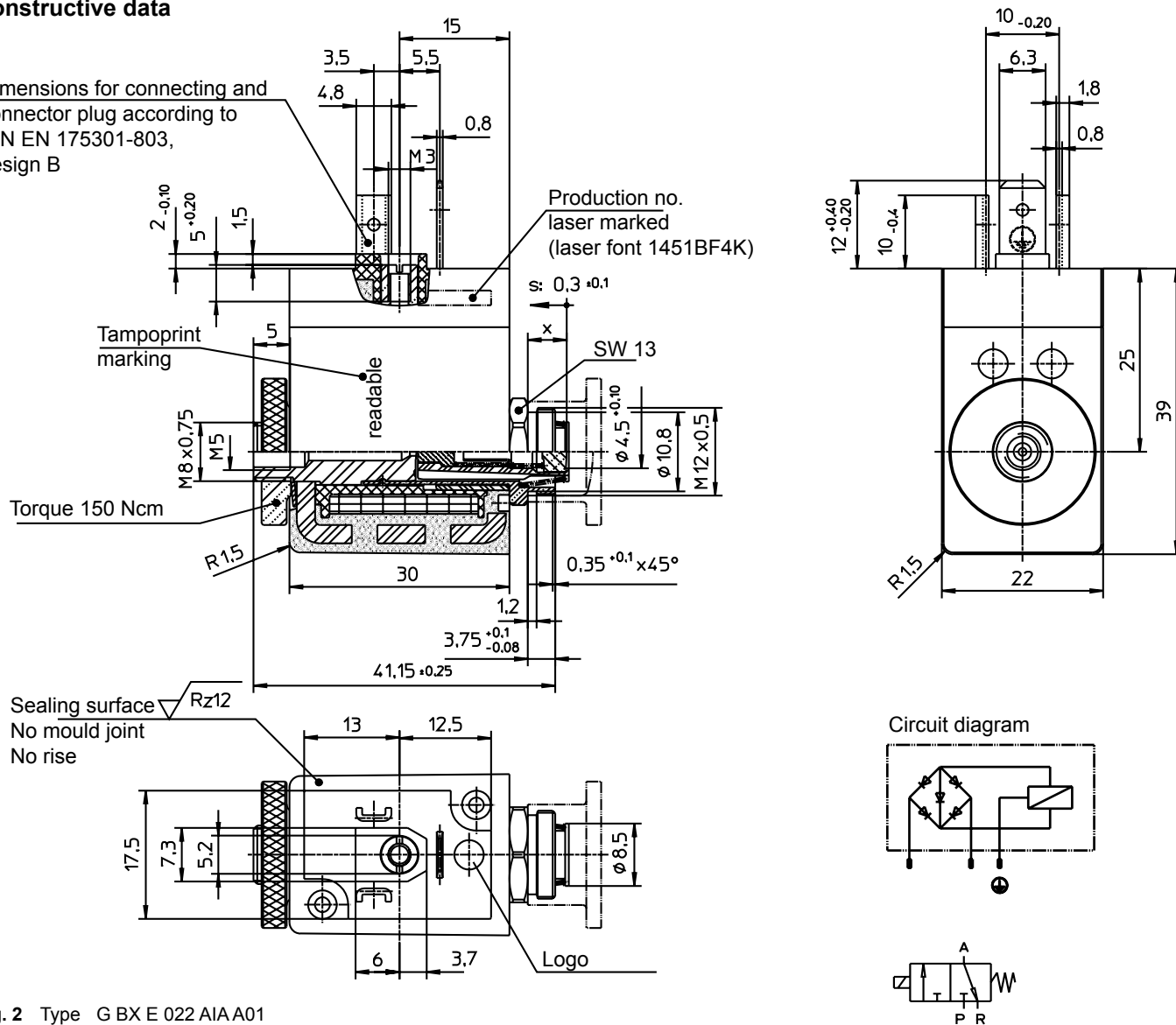


Fig. 2 Type G BX E 022 AIA A01

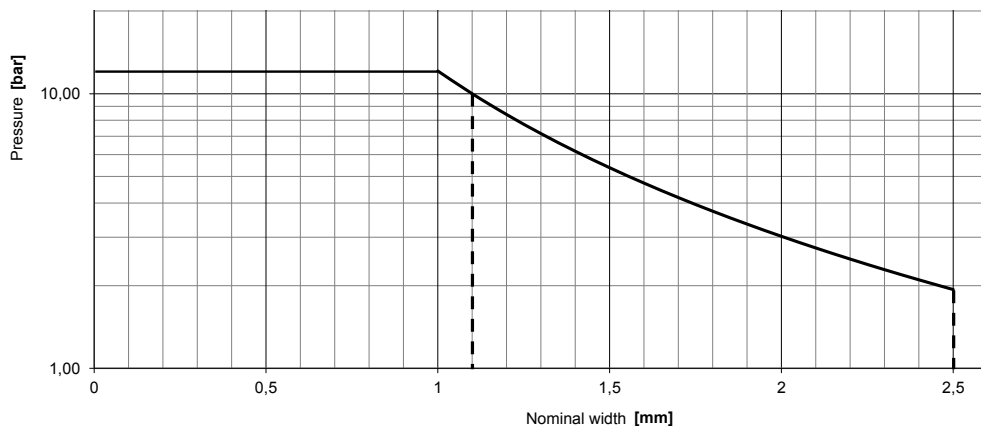
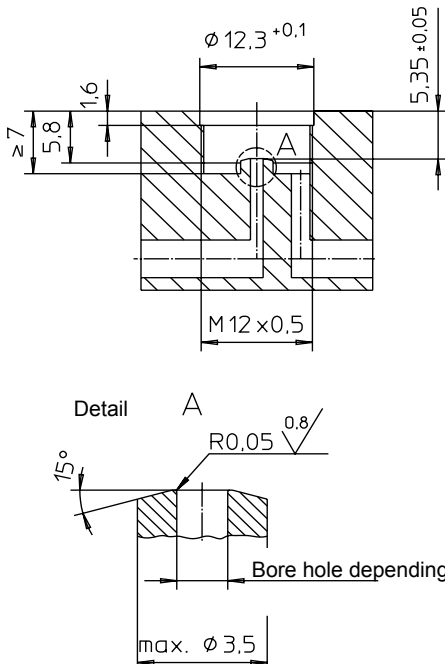


Fig. 3 switchable pressure as function of the nominal width of the valve seat

These data apply for medium compressed air for application as 3/2-way-valve normally closed. The nominal width of deaeration has to be adjusted according to the nominal width of the valve.



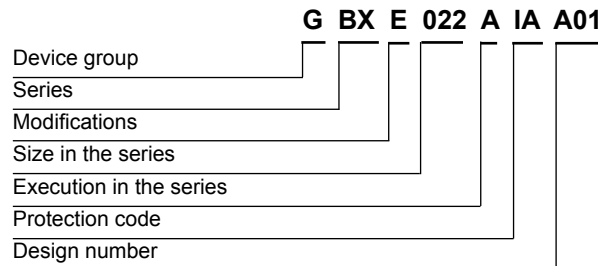
Reference values for the valve construction corresponding to the indicated list values (stroke and nominal width).

The valve construction shall be made according to fig. 4.

Valve seat with the greatest possible rectangularity to the armature axis of the solenoid and conical profile with smooth surface ensure a maximum performance and service life of the solenoid valve.

Fig. 4: Valve for G BX E 022 AIA A01

Type code



Order example

Gleichstrom

Type G BX E 022 AIA A01
 Operating mode S1 (100 %)

Special designs

Please do not hesitate to ask us for application-oriented problem solutions. In order to find rapidly a reliable solution we need complete details about your application conditions. The details should be specified as precisely as possible in accordance with the relevant -Technical Explanations.

If necessary, please request the support of our corresponding technical office.