

D.C. or A.C. Valve Solenoid

3

Product group

X BR

- To VDE 0580
- Armature space pressure-tight up to 50 bars static pressure
- Spring-mounted sealing nipples at both ends of the armature
- Coil winding to insulation rating F
- Electrical connection and protection rating if mounted correctly:
- connection by spade connectors to DIN 46247
protection to DIN VDE 0470/EN60529 IP00

Size 022:

- connection by plug connector Z KC
cable gland (2 positions x 180°)
protection to DIN VDE 0470/EN60529 IP65

Size 032:

- connection by plug connector Z KB to DIN EN 175301-803
cable gland (4 positions x 90°)
protection to DIN VDE 0470/EN60529 IP65

- Centre thread mounting
- Easy exchange of the solenoid body without opening the pneumatic circuit
- Sealing between solenoid and valve through o-ring
- Special designs on request
- Please note that the physically generated noise caused by valve solenoids may be disturbing in quiet rooms, particularly if mounted on a resonant base!
- Application examples:
Actuation of 2/2 and 3/2 way valves, particularly for pneumatic application and for other gaseous and liquid, neutral media.



Fig. 1: X BR X 022 K54 A01



Fig. 2: X BR X 032 K54 A01



Technical data

X BR X		022	032
Operating mode		S1 (100 %)	S1 (100 %)
Rated Power P ₂₀	D.C.	(W)	4.5
	A.C.	(VA)	10 / 8
Stroke s		(mm)	0.5
Reference temperature ϑ_{11}		(°C)	40
Magnetic Force F _M (without spring)	D.C	stroke 0 mm	15.7
		stroke s mm	2.6
	A.C	stroke 0 mm	3.4
		stroke s mm	3.1
Solenoid weight m _M		(kg)	0.07
Arnature weight m _A		(kg)	0.005

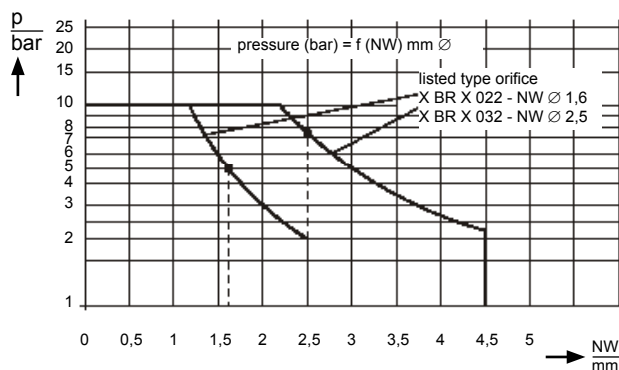


Fig. 3 Switchable pressure as a function of the poppet valve orifice, Listed type orifice = Ø 1,6 mm

These data are valid for the medium compressed air with application as 3/2 way valves de-energize to lock. The exhaust orifice has to be adapted to the valve orifice.

We recommend to use compressed air to DIN ISO 8573/1, rating 3. For lubricating the compressed air, elastomer-neutral oils are to be used, otherwise please contact the manufacturer.

Rated voltage = 24 V, or 230 V / 50 resp., on request an adaption of the winding to a rated voltage of max. = 230 V, or 250 V / 50 Hz resp. is possible.

The magnetic force values indicated in the table refer to 90 % of the rated voltage, without spring ($U_N = 24 V$, or 230 V / 50 Hz resp., magnetic force may deviate with other voltages) and hot condition. The magnetic-force values may deviate by approx. $\pm 10 \%$ from the table values due to natural dispersion.

The hot condition is based on

- mounting on a valve block of brass with dimensions 26 x 16 x 14 mm at size 022 and 50 x 32 x 25 mm at size 032
- rated voltage = 24 V, or 230 V / 50 Hz resp.
- operating mode S1 100%
- reference temperature 40° C - at size 022 and 60° C - at size 032

Operating times and max. switching frequency are not indicated, because they depend on the particular operating case and on the pressure. The max. switching frequency may be up to 36,000 s/h, depending on the application.

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 -Technical Explanations, in the effective DIN VDE0580 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*.

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.

Dimensions sheet

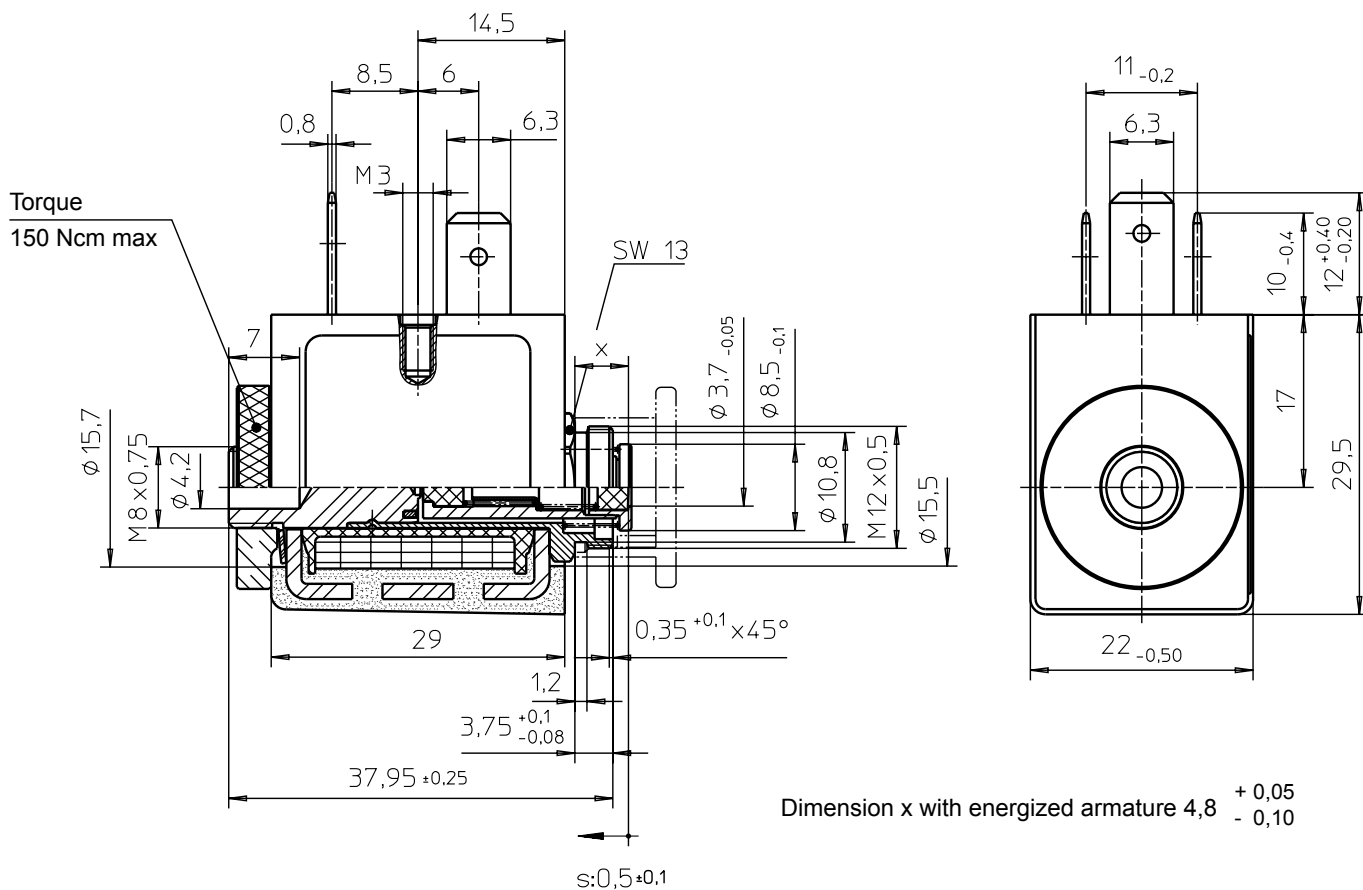


Fig. 4: X BR X 022 K54 A01 to A03

**Plug connector DIN 43650-BM2 or
Plug connector ZKC (2 positions x 180°
see pamphlet Z KB Z KC) on request**

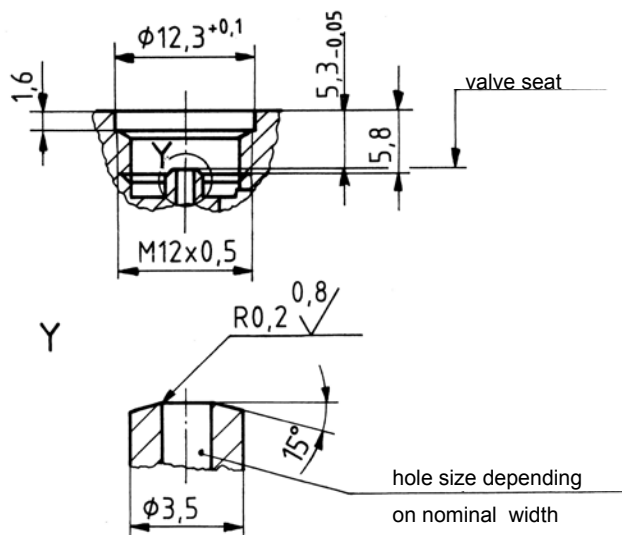


Fig. 6: Valve to X BR X 022

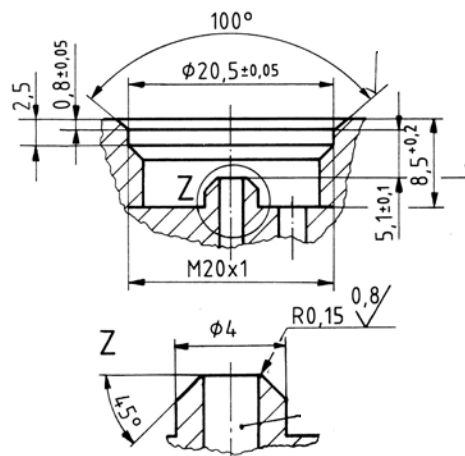


Fig. 7: Valve to X BR X 032

Guiding values for the valve construction corresponding to the indicated listed values (stroke and rated orifice).

The valve construction to be made according to fig. 6 and 7.

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

Application example

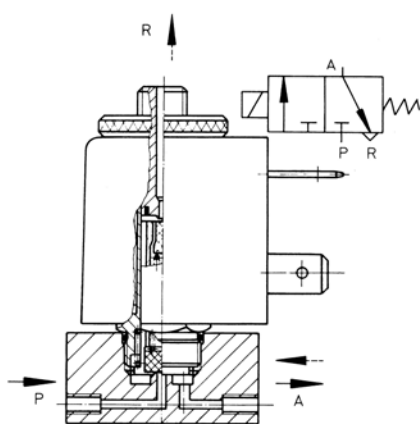


Fig. 8: X BR X 022 K 54 A01 or X BR X 032 K 54 A01 for 3/2-way valve, NC

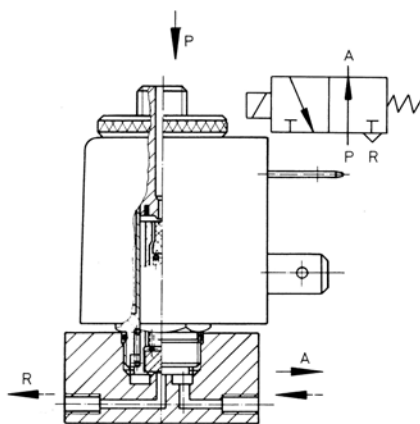


Fig. 9: X BR X 022 K 54 A02 or X BR X 032 K 54 A02 for 3/2-way valve, NO

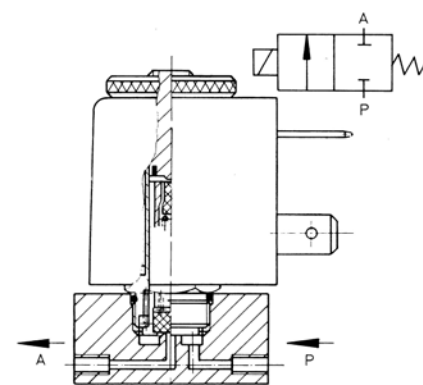


Fig. 10: X BR X 022 K 54 A03 or X BR X 032 K 54 A03 for 2/2-way valve




Type code

	X	BR	X	022	K	54	A01
Equipment group							
Basic construction							
Modifications							
Size							
Arrangement							
Basic protection							
Design number							

Order Example

DC:	Type	X BR X 022 K54 A01
	Voltage	== 24 V
	Relative duty rating	S1 100%
AC:	Type	X BR X 022 K54 A01
	Voltage	230 V / 50 Hz
	Relative duty rating	S1 100%

Specials 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.