

D.C. Valve Solenoids for Pneumatics

3

Product group

X BK R 015

- Designed to VDE 0580
- Armature space pressure-tight up to 20 bars static pressure
- Coil insulation rating class F
- Electrical connection and protection rating if mounted properly:
 - spade connectors to DIN 46247
protection rating to DIN VDE 0470/EN 60529 - IP 00
 - plug connector to DIN 43650-C with flat seal
protection rating to DIN VDE 0470/EN 60529 - IP 65
- Mounting with fastenings pins
- Serial mounting is possible
- Sealing between solenoid and valve through O-ring
- Special designs on request
- Ducted exhaust air on request
- Application examples:

Actuation of 2/2 and 3/2 directional seat valves, particularly for pneumatics, other gaseous media and neutral fluids.

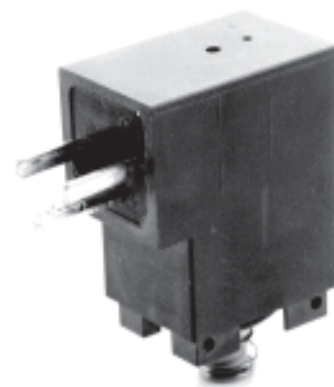


Fig. 1: X BK R 015 K54 A01



Technical data

X BK R 015 K54 A01	
Voltage U_N	24 VDC \pm 10 %
Operating mode	S1
Rated current I_{20}	84 mA
Starting current I_E	---
Holding current I_H	---
Draw-in current U_{an}	\geq 21.6 V
Drop voltage U_{ab}	\leq 0.7 V
Rated Power P_{20}	2 W
Operating temperature	-10 °C ... +50 °C
Medium	lubricated and nonlubricated, filtered air
Temperature of medium	-5 °C ... +80 °C
Ambient temperature	-15 °C ... +50 °C
Rated solenoid stroke	0.4 mm
Rated magnetic force	2.1 N

Rated voltage \approx 24 VDC, on request the coil winding can be adjusted to a rated voltage of \approx 36 VDC maximum.

The magnetic-force values mentioned in the tables refer to 90 % of the rated voltage, without spring ($U_N = \approx$ 24 VDC, for other voltages the magnetic force may deviate) and in hot condition.


Owing to natural dispersion, the magnetic-force values may deviate by 10 % from the values indicated in the tables.

Hot condition is based on:

- a) mounting on heat-insulating base
- b) rated voltage \approx 24 VDC
- c) operating mode S1
- d) reference temperature 50° C

These data refer to the medium compressed air, and application as 3/2-port directional control valve, de-energized to lock.

We recommend to use compressed air to DIN ISO 8573/1, class 3. For lubricating the compressed air, elastomer-neutral oils have to be used, otherwise the manufacturer should be contacted.

Please make sure that the described devices are suitable for your application. Please find further details and definitions in our  Technical Explanation or, respectively, in VDE 0580.

Note on the technical harmonisation guidelines within the EU



Electromagnetic solenoids of this product range are subject to the low-voltage guideline 73 / 23 EWG.

To guarantee the targets of this regulation, products are manufactured and inspected to the valid edition of DIN VDE 0580. This also equals a declaration of conformity by the manufacturer.

Note on the EMC (electromagnetic compatibility) guideline 89/336 EWG

Electromagnetic solenoids are not affected by this guideline because neither do they cause electromagnetic disturbances nor can they be disturbed through electromagnetic disturbances. Therefore, the adherence to the EMC guideline has to be guaranteed by the user through appropriate circuitry wiring. Examples for protection circuits can be taken from the corresponding technical documents.

Dimensions sheet

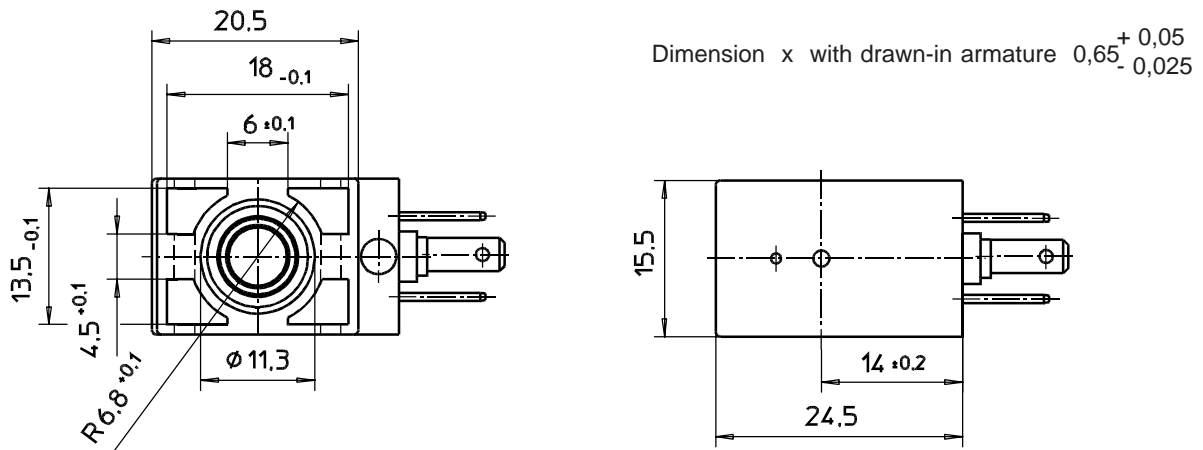
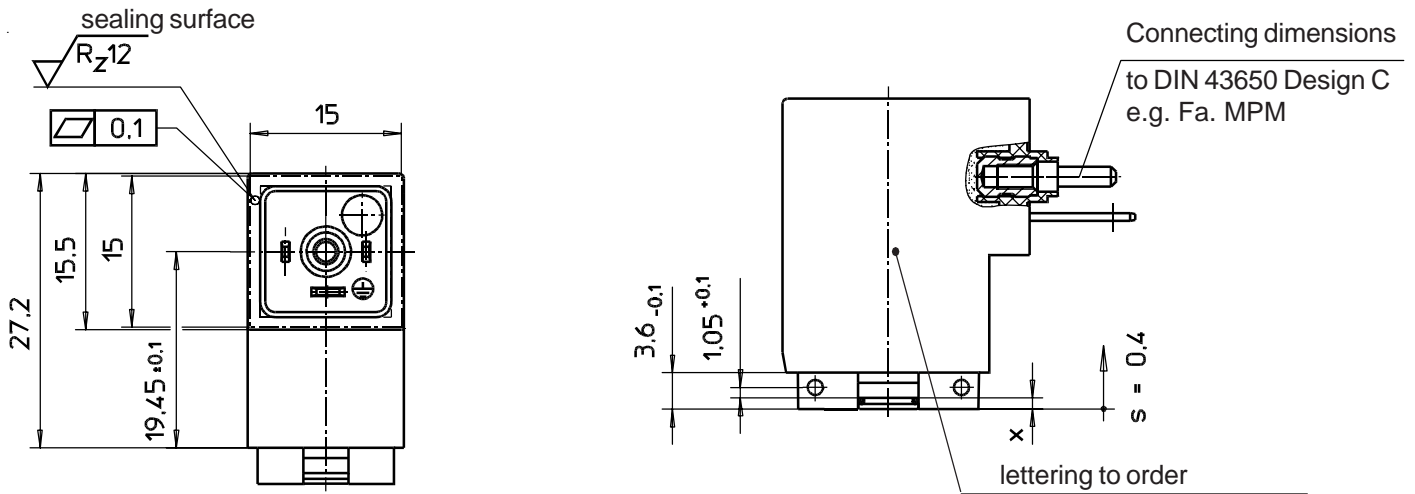


Fig. 2: Type X BK R 015 K54 A01

The solenoid shown is not a ready-to-use device in the sense of DIN VDE 0580. The general requirements and protective measures to be taken by the user, are included in DIN VDE 0580. The use of the shown device in safety relevant applications needs always the written agreement of MSM.

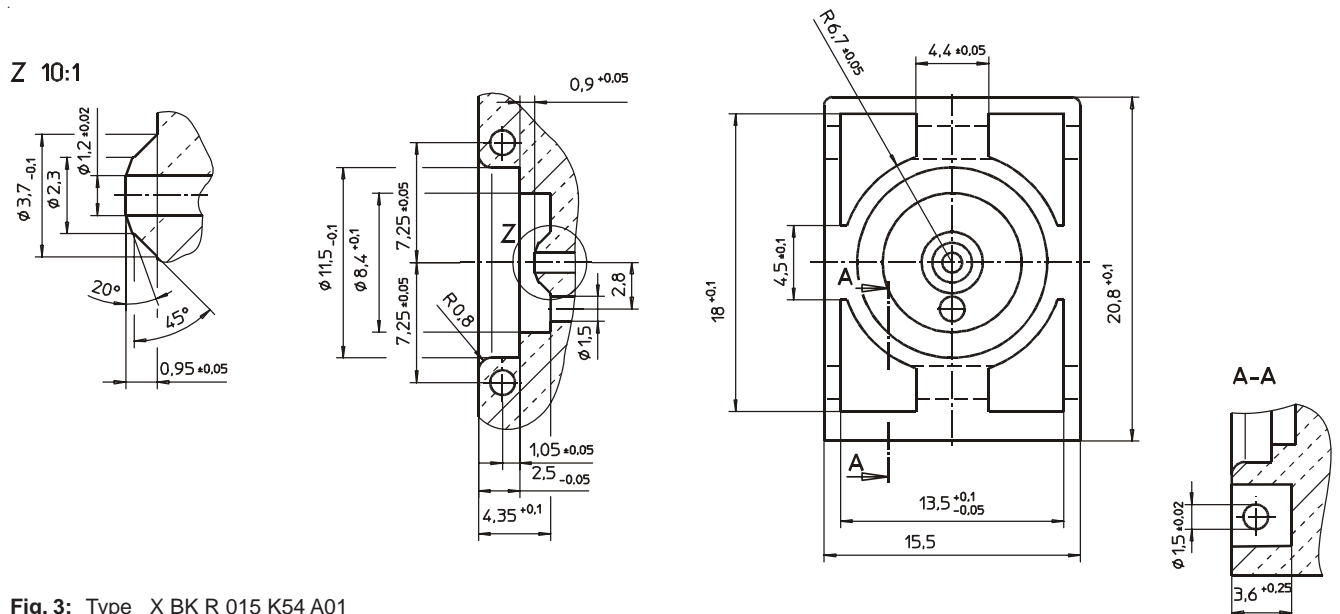


Fig. 3: Type X BK R 015 K54 A01



Application example

When being used with the valve part, the following pneumatic data can be achieved:

X BK R 015 K54 V01	
Function	3/2 NC
Nominal width P	1.1 mm
Nominal width R	1.1 mm
Pressure range	0 - 10 bar
Response time	≤ 20 ms
Rated flow P → A (p=6 bar Δp = 1 bar)	27 l/min
Rated flow A → R (p=6 bar Δp = 1 bar)	28 l/min
Manual override	push type

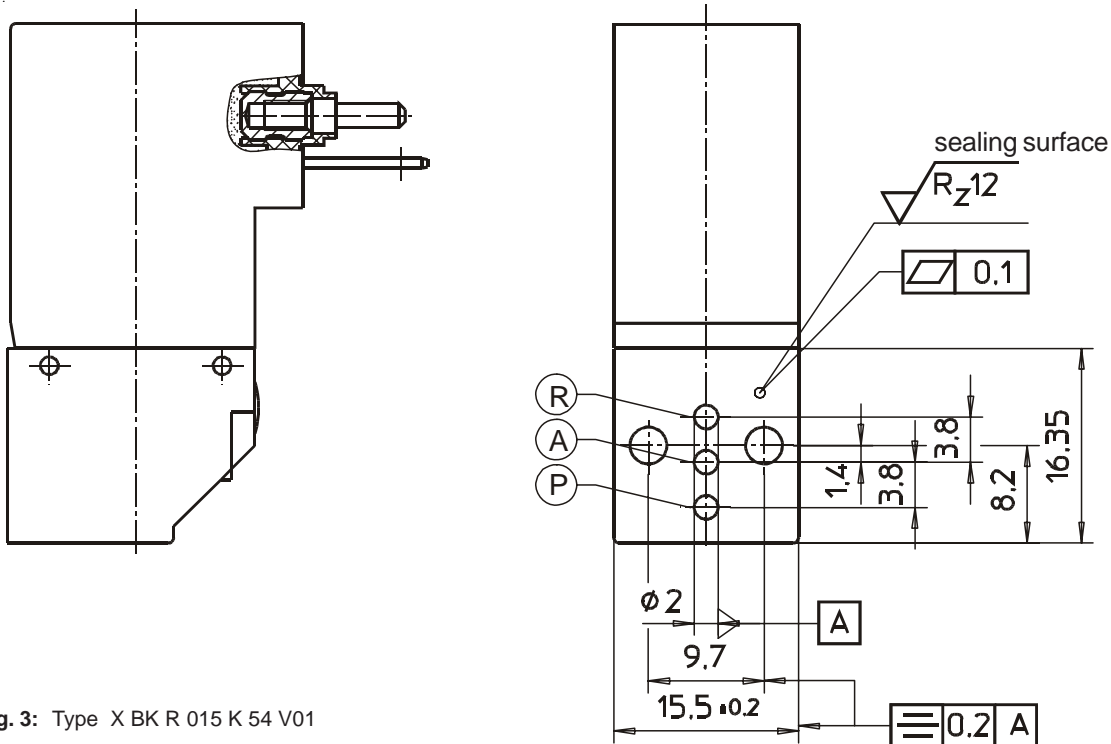


Fig. 3: Type X BK R 015 K 54 V01

Order Example

Type X BK R 015 K54 A01
Voltage 24 V DC
Operating mode S1 (100 %)

Specials

Special designs and modifications are available on request for which full application conditions should be specified in accordance with our Technical Explanations.