Safety-Shut-Off- Valve

3
Product group

G PC S 040

Replacement for G PC S 040 K69 V01

Function

- 2/2 NC
- Pilot-controlled
- Media: H_2, N_2, air, mixture of H_2 and N_2
- Nominal working pressure (NWP) up to 21 bar
- Two-stage opening to prevent pressure surges
- Seal seat optimized for low temperatures
- Integrated filter

Fig. 1: Type GPCS040K69V01

Construction

- Compact
- Central fastening or flange mounting
- Protection class according to DIN EN 60529: IP6K9K if mounted properly and with suitable mating connector
- Electrical connection via plug TE MCP 2.8 mm

Fig. 2: Type GPCS040K69V03

Application examples

- Safety shut-off valve for hydrogen in medium pressure range at mobile fuel cells

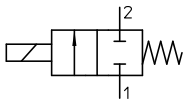
Standards and tests

- IATF 16949
- Testing according to EC79

Options and accessories on request

- Various electrical plug connections
- Higher input pressures
- Nominal size adaptations
- ATEX version for stationary applications
- Customer-specific mechanical interface
- Version for natural gas

Technical data

GPCS040K69V01 / V03		
Function		2/2 NC pre-controlled
Voltage control		PWM with holding current reduction (HSA)
Rated voltage U_N	(VDC)	12 (9 ... 16) / 24 (20 ... 32)
Rated Current I_N	(A)	< 1.5 / < 0.8
Holding current	(A)	< 0.8 / < 0.4
Relative Einschaltdauer		S1 (100%) with holding current reduction
Inductance		~13 mH (1.6A, 1kHz, 1V) / ~19 mH (0.8A, 1kHz, 1V)
Insulation class		H
Ambient temperature	(°C)	-40 ... +85
Temperature medium	(°C)	-40 ... +100
Media		H2, N2, air
Protection class		IP6KX, IPX6K, IPX7, IPX9K
Service life		> 50.000
Rated operating pressure (NWP)	(barg)	16
Maximum input pressure (MAWP)	(barg)	21
Burst pressure	(barg)	> 65
Flow direction		1 -> 2
Circuit diagram		
Nominal width main stage	(mm)	8
Nominal width preliminary stage	(mm)	1.2
K_V	(m3/h)	0.9
Reaction time	(ms)	< 60
Leakage intern	(mbar l/sec)	< $1x10^{-4}$ (Helium)
Leakage extern	(mbar l/sec)	< $1x10^{-4}$ (Helium)
Weight		0.425
Compliant to		Regulation (EC) No. 1907/2006 (REACH) Directive 2011/65/EU (RoHS II + RoHS III) Directive 2000/53/EG (ELV)

Rated voltage

Nominal voltages are listed in above table and are also standard values. The possibility of winding adjustments to other nominal voltages can get checked on request.

The devices correspond to protection class III. Electrical equipment of protection class III may be only connected to low voltage systems (PELV, SELV)(IEC 60364-4-4-41).

Supply availability

The shown device is a basic device as a basis for customer-specific developments and designs. Samples and variants on request.

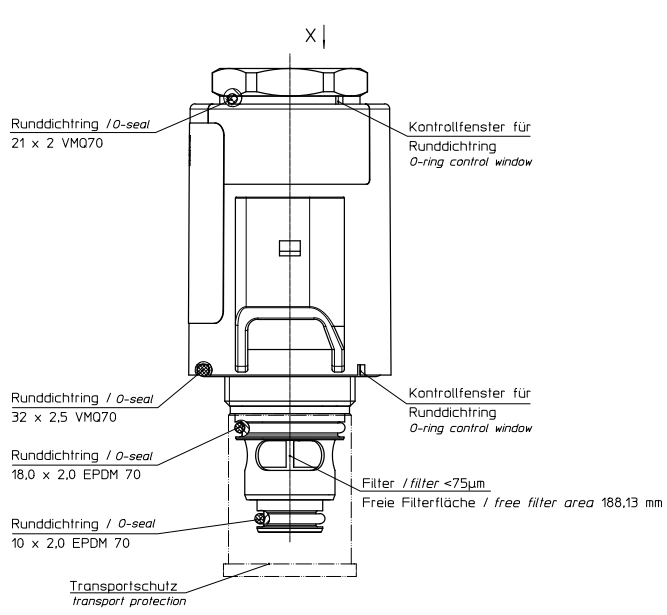
Information and remarks concerning European directives can be taken from the correspondent information sheet which is available under *Produktinfo.Magnet-Schultz.com*.

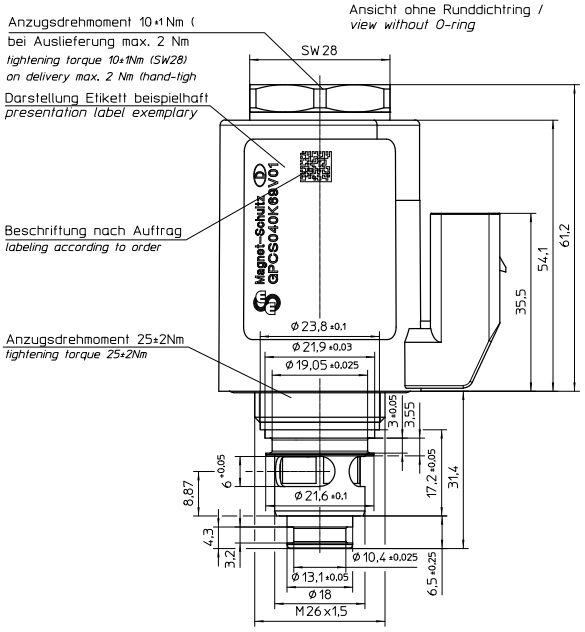
Please make sure that the described devices are suitable for your application. Our offers for these devices are based on the assumption of maximal 8 in an FMEA severity table, i. e. in case of malfunction of the device model as offered, there is, amongst others, no jeopardy of life or limb. Supplementary information concerning its proper installation can be taken also from the –Technical Explanation, the effective DIN VDE0580 as well as the relevant specifications.

This part list is a document for technically qualified personnel.

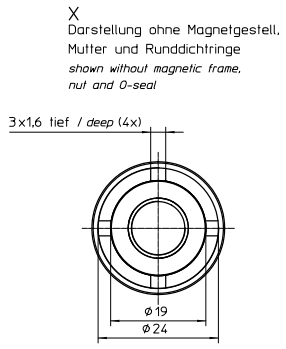
The present publication is for informational purposes only and shall not be construed as mandatory illustration of the products unless otherwise confirmed expressively.

Dimensional drawing

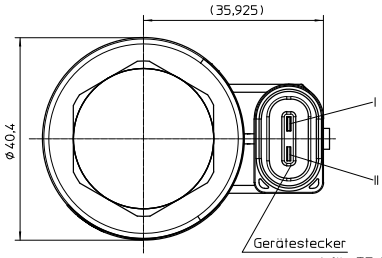




Runddichtringe sind mit einem Werkstoff- und medienverträglichem Fett/Schmiermittel zu fügen
sealing must be assembled with a grease/lubricant compatible with material and medium



Montagewerkzeug der Mutter nach Zeichnungsnummer 791793
assembly tool at the nut according to drawing number 791793



Gerätestecker
- passend für TE MCP 2.8 (TE 1-1355200-1)
- Steckerbuchse 2 Pins / 1 Reihe
- Pins: 2,8mm x 0,8mm, Ag-beschichtet

plug
- *suitable for TE MCP 2,8 (TE 1-1355200-1)*
- *female plug 2 pins / 1 row*
- *pins: 2,8mm x 0,8mm, Ag-plated*

Schaltplan /
wiring diagram

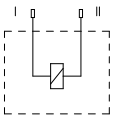
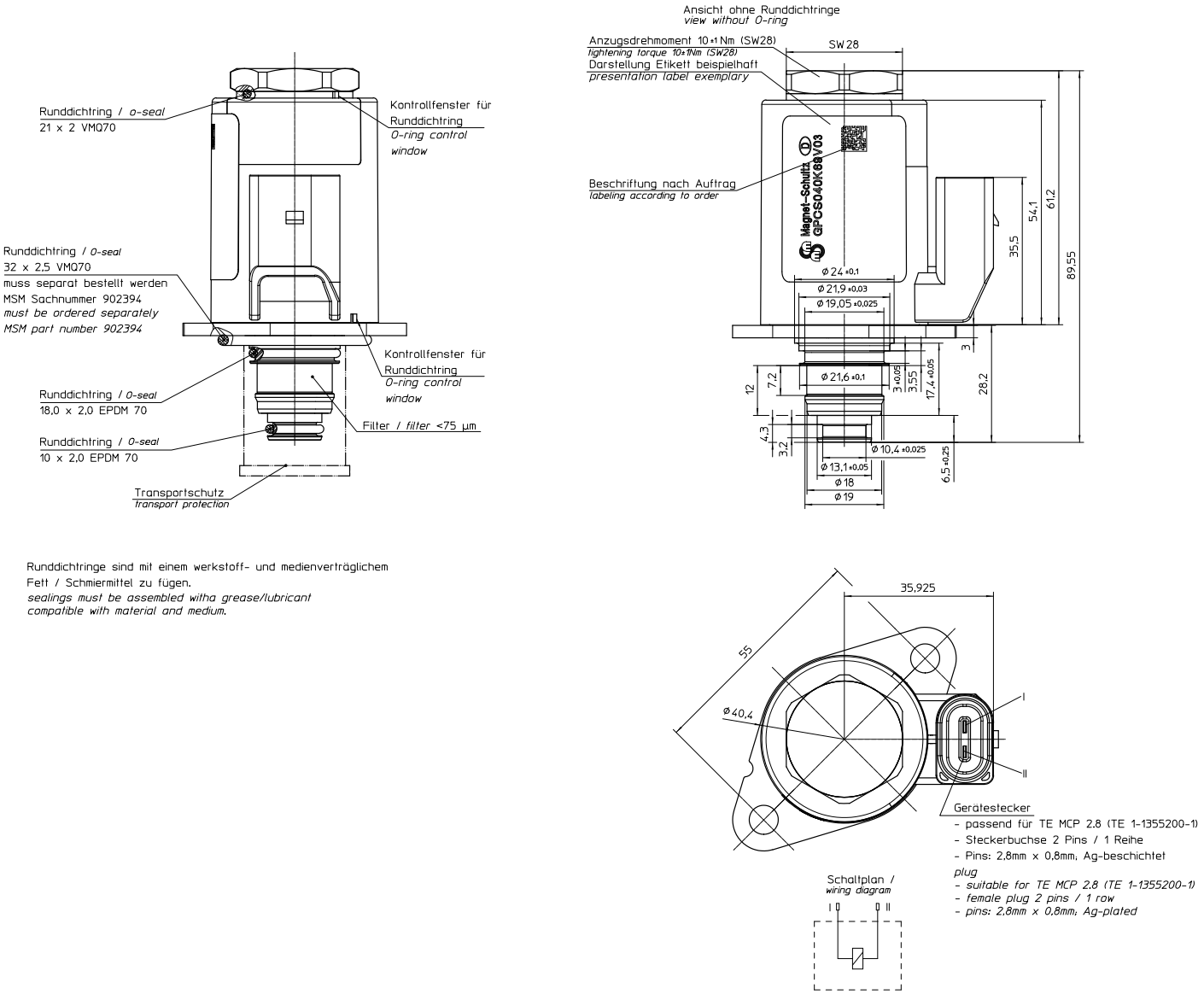


Fig. 3: Type G PC S 040 K69 V01 (G013814 Index g)

Dimensional drawing



Runddichtringe sind mit einem werkstoff- und medienverträglichem Fett / Schmiermittel zu fügen.
sealings must be assembled witha grease/lubricant compatible with material and medium.

Fig. 4: Type G PC S 040 K69 V03 (G013919 Index g)

Installation dimensions (sketch with guide values)

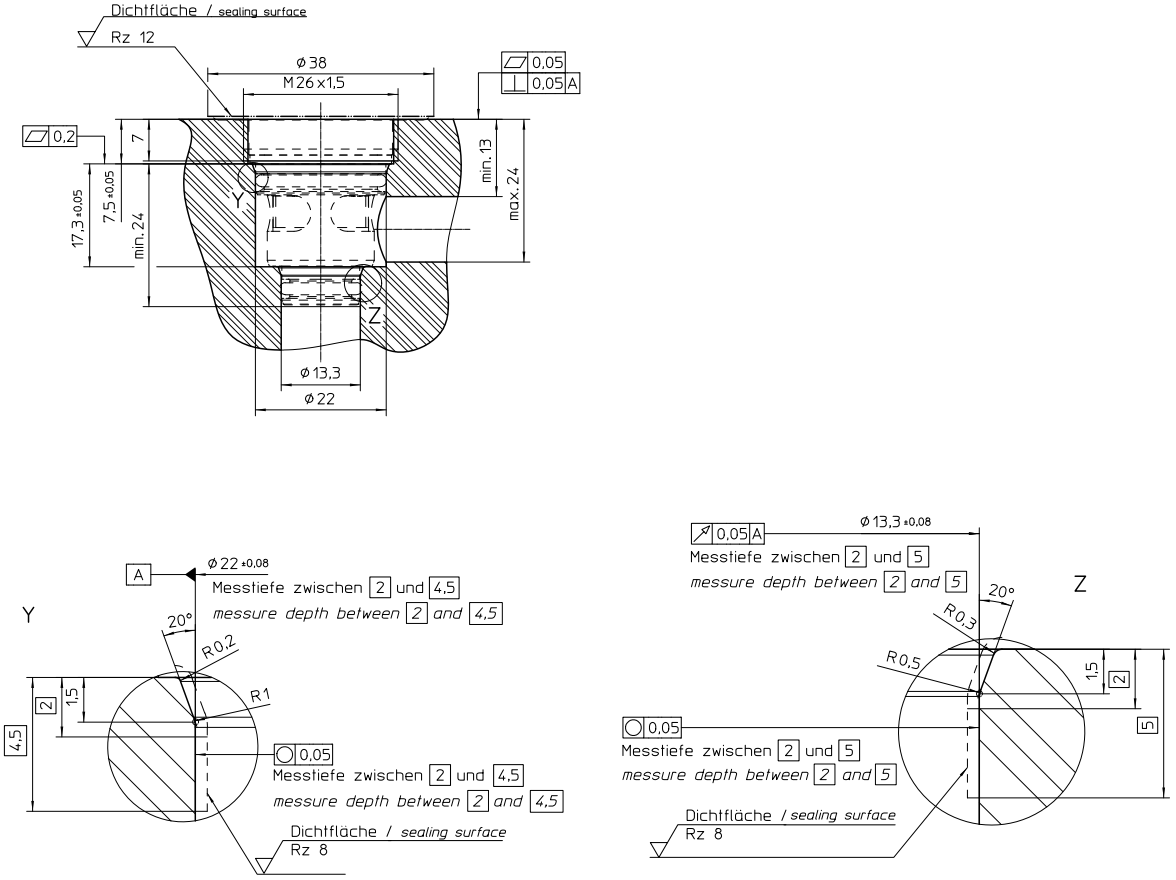


Fig. 5: Connection diagram Type G PC S 040 K69 V01 (G013814 Index g)

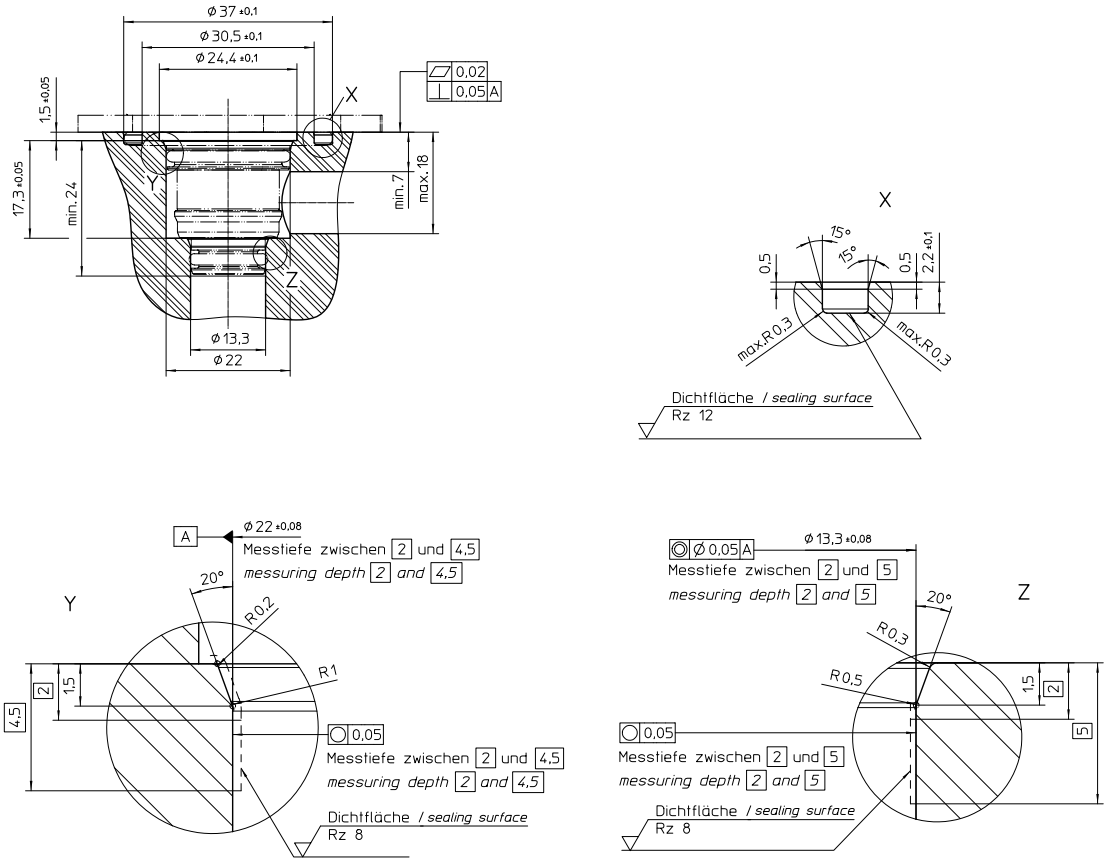


Fig. 6: Connection diagram Type G PC S 040 K69 V03 (G013919 Index g)

Type code

Example	G PC S	040	K69 V01	Designation	Material no.	
Type	G PC S				12V 100%ED with HSA	24V 100%ED with HSA
Size		040				
Code for execution			K69 V01	Thread	G013814002	G013814003
			K69 V03	Flange	G013915002	G013915001

Example

Type	G PC S 040 K69 V01
Voltage	⎓ 12 V DC
Operating mode	S1 / 100 % / HSA
Material no. [1)]	G013814002

1) optional specification