Media-separated solenoid valve

3
Product group

G PC S 028 GEN 1.2

Function

- 2/2 NC
- Directly controlled
- For H_2O, Coolant, H_2, air, neutral gases
- Medium-isolated
- Nominal working pressure (NWP) up to 3 bara
- Maximum pressure (MAWP) up to 4 bara
- High switching life time

Fig. 1: Type G PC S 028 K69 V45 / V46 / V47

Construction

- Compact design
- Cartridge valve for assembly in valve block provided by customer
- Integrated filter at port 1 (input)
- Fastening by 2 diagonal drill holes on the solenoid base frame
- Electrical connection via plug TE Micro Quadlock 2-pole coding A
- Protection class according to DIN EN 60529 when properly installed IP6K9K
- Serial mounting possible

Application examples

- Purge/drain valve for fuel cells

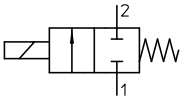
Options and accessories on request

- Valve block
- Components with valves and sensors (water separator)
- Version without filter for mounting a heating element
- Various electrical plug connections
- Other nominal widths
- Please contact us for application related solutions

Standards and approvals

- IATF 16949

Technical data

G PC S 028 K69 ...		V45	V46	V47
Function		2/2 NC		
Control		PWM > 1000 Hz		
Rated voltage U_N	(V DC)	12 (9 ... 16) / 24 (20 ... 32)		
Rated resistance R_{20}	(Ω)	7.7 / 34		
Max. attraction current A	(A)	2.9 / 1.3		
Holding current I_H	(A)	0.4 / 0.2		
Max. power consumption at holding current	(W)	2.0 / 2.2		
Insulation class		H		
Relative duty cycle		S1 100% ED with holding current reduction (HSA)		
Nominal ambient temperature	(°C)	-25 ... +85		
Leakage internal	ml/min @ 6 bar (air)	< 1		
Leakage external	ml/min @ 6 bar (air)	< 1		
Switching service life (full strokes, regular operation)		> 24 Mio. SSP		
Nominal width	(mm)	1,2	1,9	3,0
Kv at I_N	(m^3/h)	0,045	0,095	0,26
Rated working pressure (NWP)	(bara)	3		
Max. input pressure (MAWP)	(bara)	4		
Burst pressure	(bara)	> 6		
Mesh width filter	(µm)	< 200		
Circuit diagram				
Response time	(ms)	< 100		
Weight	(kg)	ca. 0,15		
Compliant to		Regulation (EC) No 1907/20006 (REACH) Directive 2011/65/EU (RoHS II + RoHS III) ELV directive (2000/53/EC)		

Rated voltage

Rated 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 only be connected to low voltage systems (PELV, SELV)(IEC 60364-4-4-41).

Delivery capacity

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 online *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 to 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.

This publication is for information purposes only and is not to be regarded as a binding representation of the products, unless this is expressly confirmed by us.

Dimensional drawing

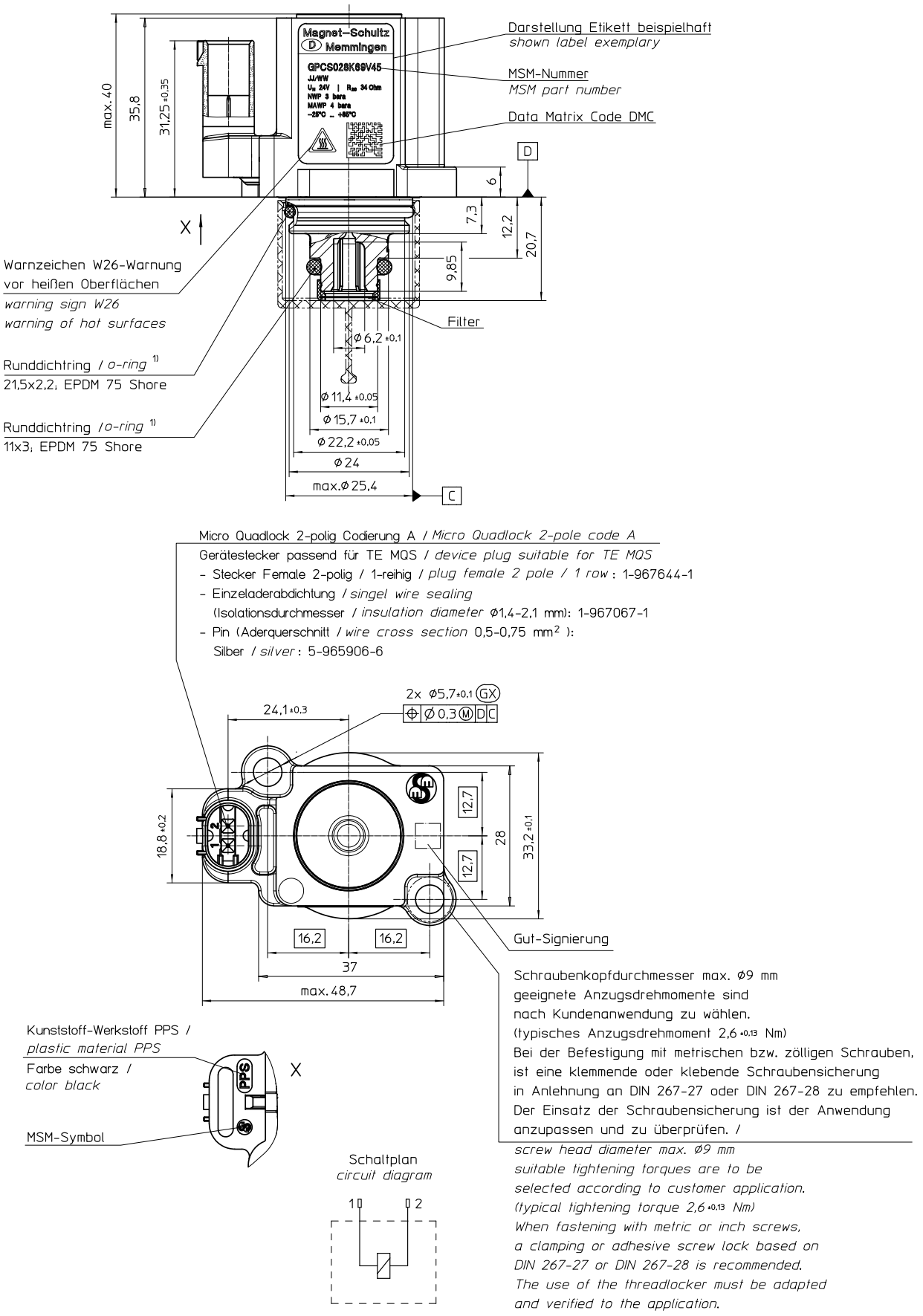


Fig. 2: Type G PC S 028 (Reference G014130 Index a)

Installation diagram

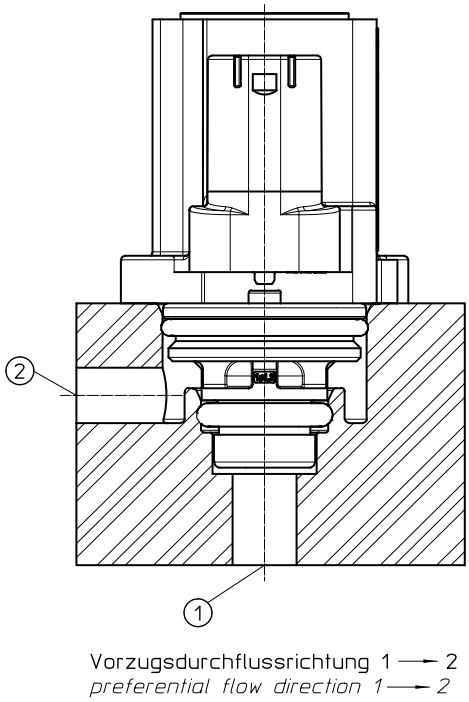


Fig. 3: Installation diagram Type G PC S 028 (Reference G014130 Index a)

Connection diagram (sketch with recommended dimensions)

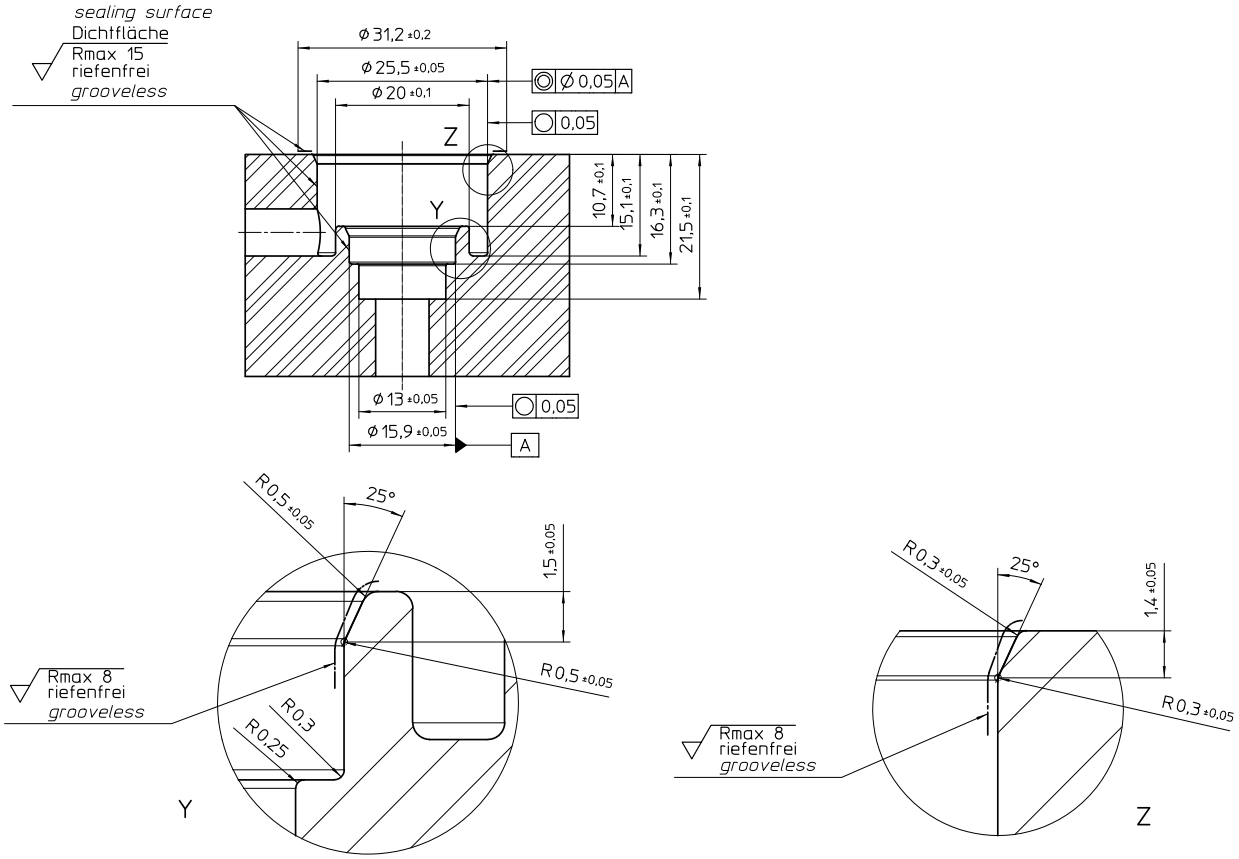
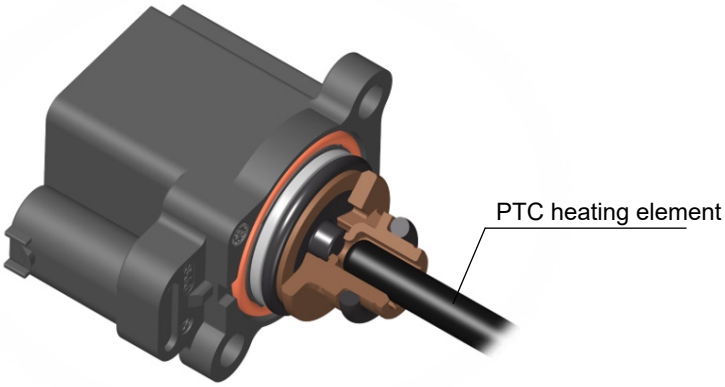


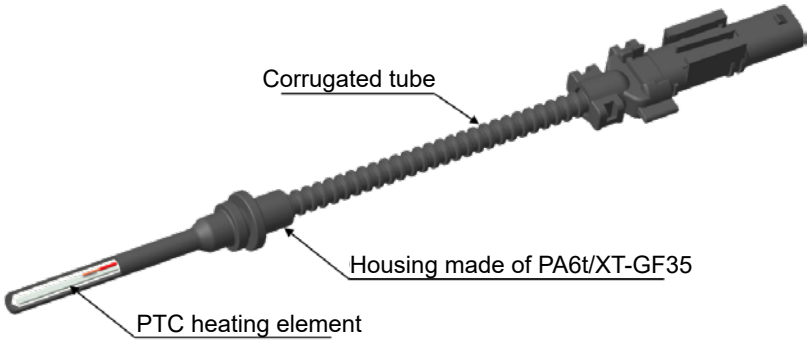
Fig. 4: Recommended cavity Type G PC S 028 (Reference G014130 Index a)

Option for mounting a PTC-heating element:

For applications where there is a risk of condensation freezing and thus preventing the function or damaging the functional unit, versions without filters are available into which a PTC heating element can be inserted by the customer.



Example of a PTC-heating element



Type code

Example	G PC S	028	K69 V45	Nominal width	Material no.	
Type	G PC S				12VDC 100%ED with HSA	24VDC 100%ED with HSA
Size		028				
Code for version			K69 V45	1,2 mm	G014130001	G014130002
			K69 V46	1,9 mm	G014112001	G014112002
			K69 V47	3,0 mm	G014110001	G014110002

Example

Type	G PC S 028 K69 V45
Voltage	⎓ 12 V DC
Operating mode	S1 / 100% / HSA
Material no. [1)]	G014130001

1) optional specification