

Safety-Shut-Off- Valve

3

Product group

G PC S 040 GEN 2

Function

- 2/2 NC
- Pilot-controlled
- Media: H₂, N₂, air, mixture of H₂ and N₂
- Nominal working pressure (NWP) up to 21 bar
- Two-stage opening to prevent pressure surges
- Seal seat optimized for low temperatures
- Integrated filter

Construction

- Compact
- Flange mounting
- Protection class according to DIN EN 60529: IP6K9K if mounted properly and with suitable mating connector
- Plug suitable for Hirschmann '1.2 Seal-Star' e.g. FA Connector Pins Ag-coated Coding A

Application examples

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

Standards and tests

- IATF 16949

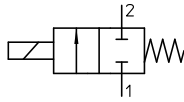
Options and accessories on request

- Valve block
- Various electrical plug connections and codings
- Higher input pressures
- Nominal size adaptations
- ATEX version for stationary applications
- The alignment of the flange to the plug has been rotated by 90°
- Customer-specific mechanical interface
- Version for natural gas



Fig. 1: Type G PC S 040 K69 V22 / V28

Technical data

GPCS040K69	V22	V28
Function	2/2 NC pre-controlled	
Voltage control	PWM > 1000 Hz 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	
Duty cycle	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	IP6K9K	
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	12
Nominal width preliminary stage (mm)	1.2	
K_V (m3/h)	1.5	> 2.5
Reaction time (ms)	< 60	
Leakage external (mbar l/sec)	< 1×10^{-4} (Helium)	
Leakage internal (mbar l/sec)	< 1×10^{-4} (Helium)	
Weight (kg)	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


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 60364-4-41).

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

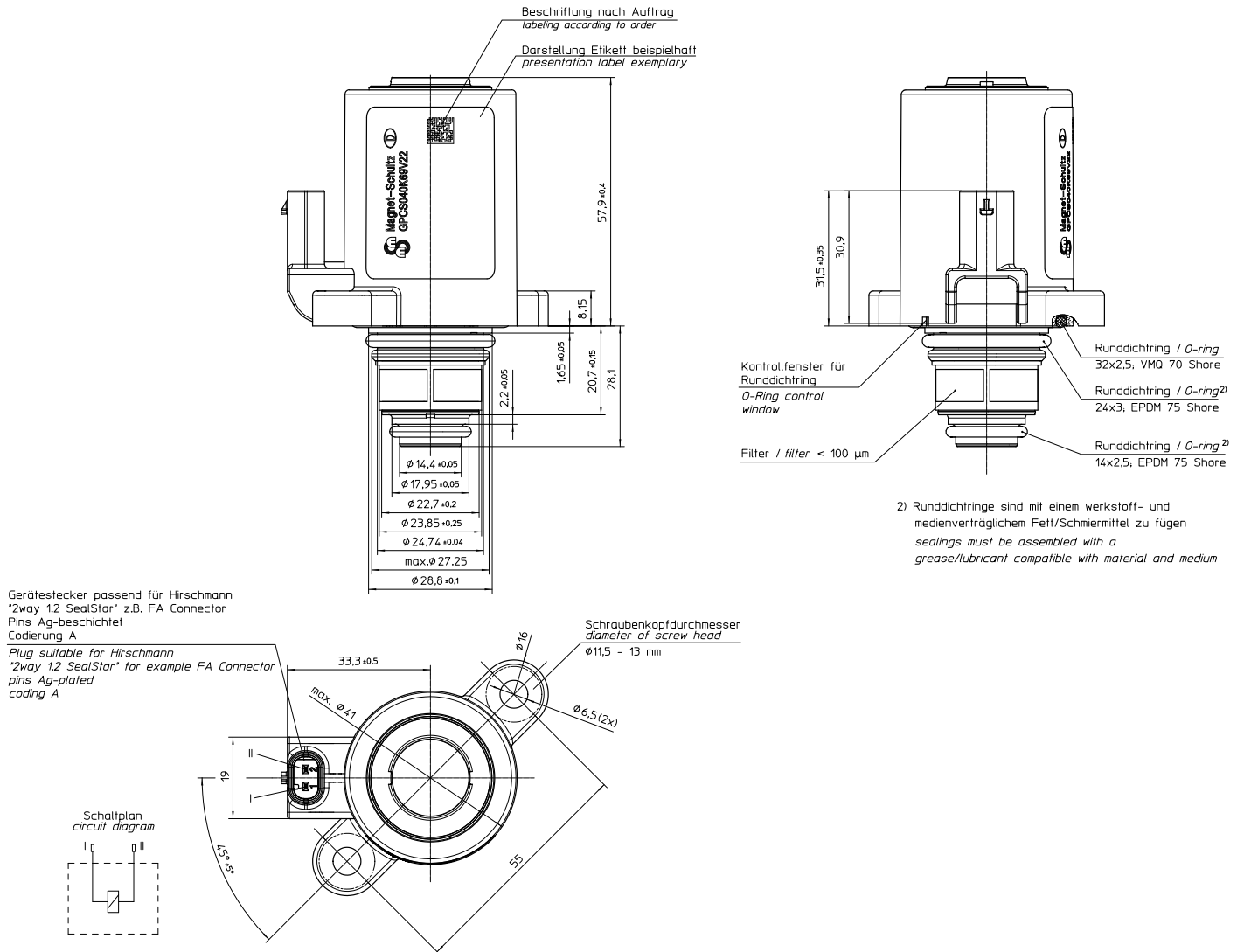


Fig. 2: Type G PC S 040 K 69 V 22 (Reference G014135 Index -)

Installation dimensions (sketch with guide values)

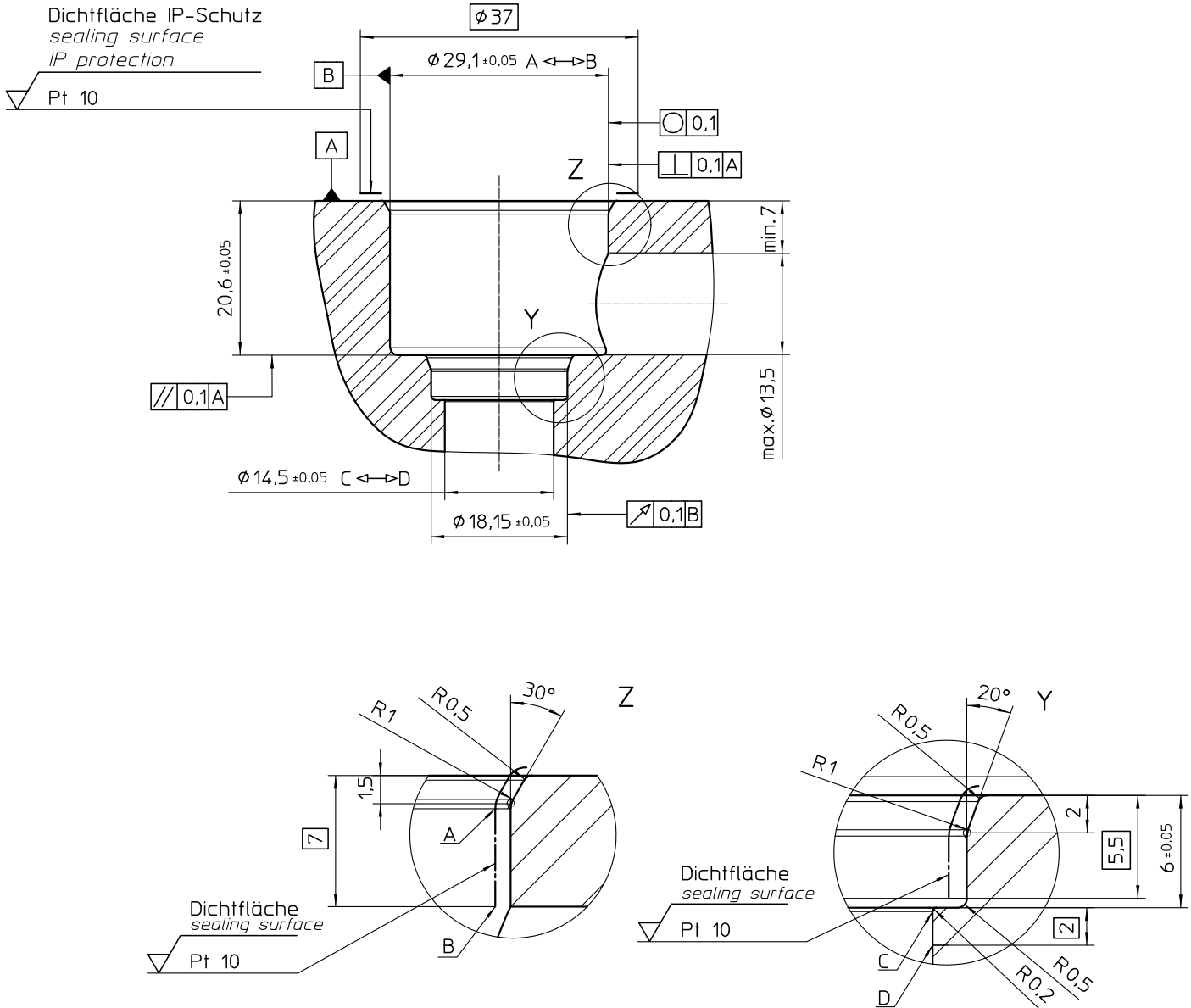


Fig. 3: Connection diagram Type G PC S 040 K69 V22 / V28 (Reference G014135 Index -)

Type code

Example	G PC S	040	K69 V22	Description	Material no.	
Type	G PC S				12V 100%ED with HSA	24V 100%ED with HSA
Size		040				
Code for execution			K69 V22	NW 8 mm	G014135001	G014135002
			K69 V28	NW 12 mm	G014149001	G014149002

Order Example

Type G PC S 040 K69 V22
Voltage == 12 V DC
Operating mode S1 / 100 % / HSA
Material no. ¹⁾ G014135001

¹⁾ optional specification

