

Safety-Shut-Off- Valve

3

Product group

G P C S 040

Replacement for G PC S 040 K69 V01

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
- 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

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

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

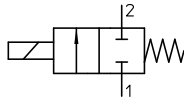


Fig. 1: Type GPCS040K69V01



Fig. 2: Type GPCS040K69V03

Technical data

GPCS040K69V01 / V03		
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		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 external	(mbar l/sec)	< 1×10^{-4} (Helium)
Leakage internal	(mbar l/sec)	< 1×10^{-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 only be connected to low voltage systems (PELV, SELV)(IEC 60364-4-41).

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 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

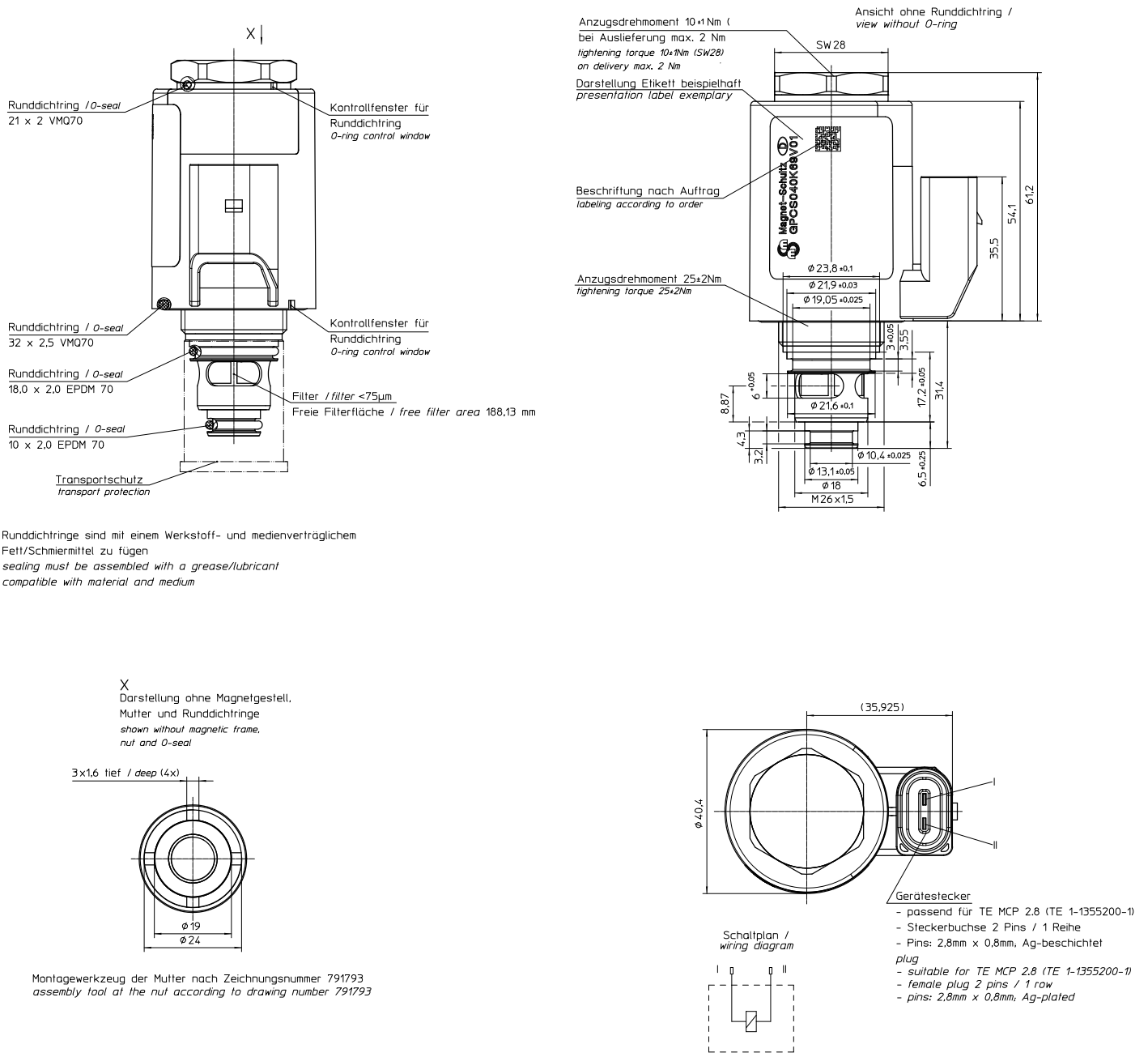


Fig. 3: Type G PC S 040 K69 V01 (G013814 Index g)

Dimensional drawing

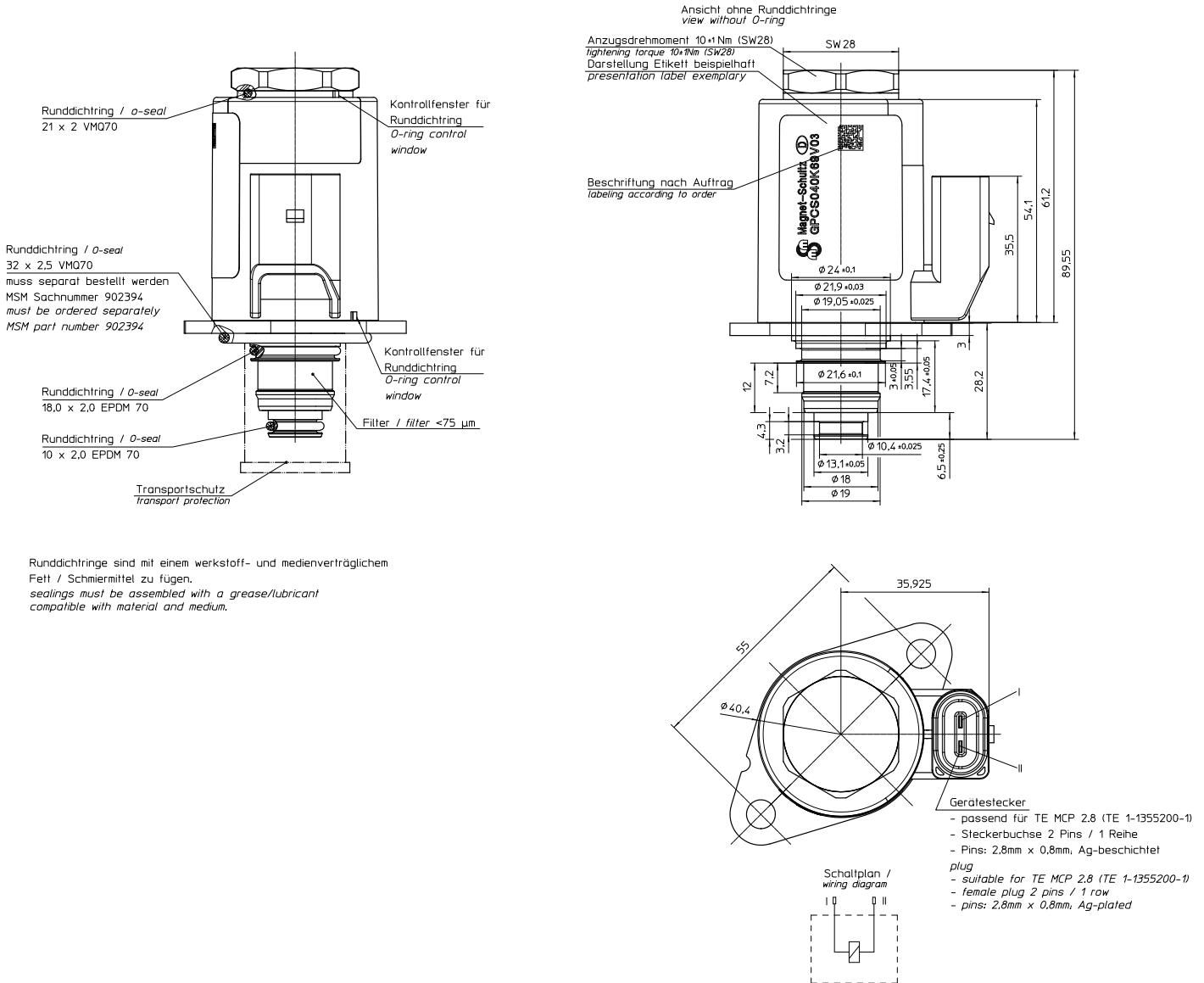


Fig. 4: Type G PC S 040 K69 V03 (G013919 Index g)

Installation dimensions (sketch with guide values)

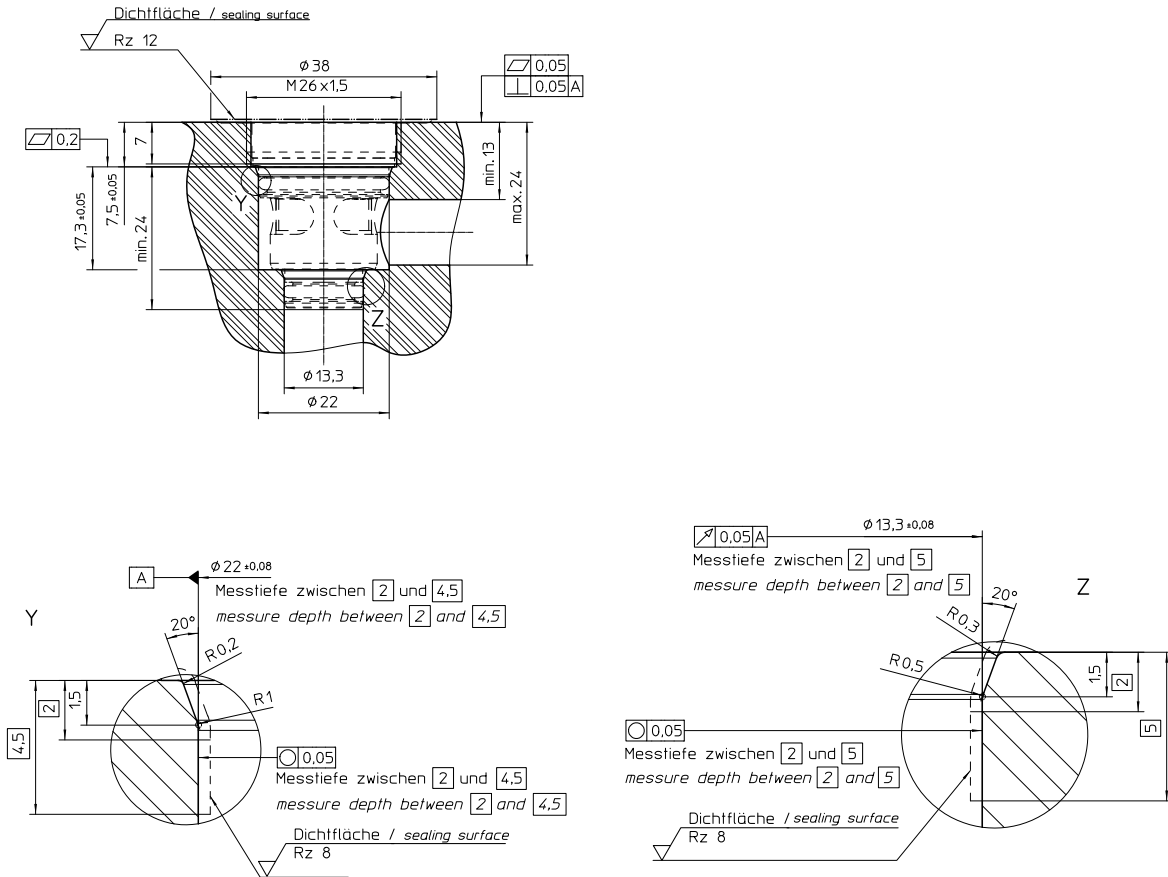


Fig. 5: Connection diagram Type G PC S 040 K69 V01 (G013814 Index g)

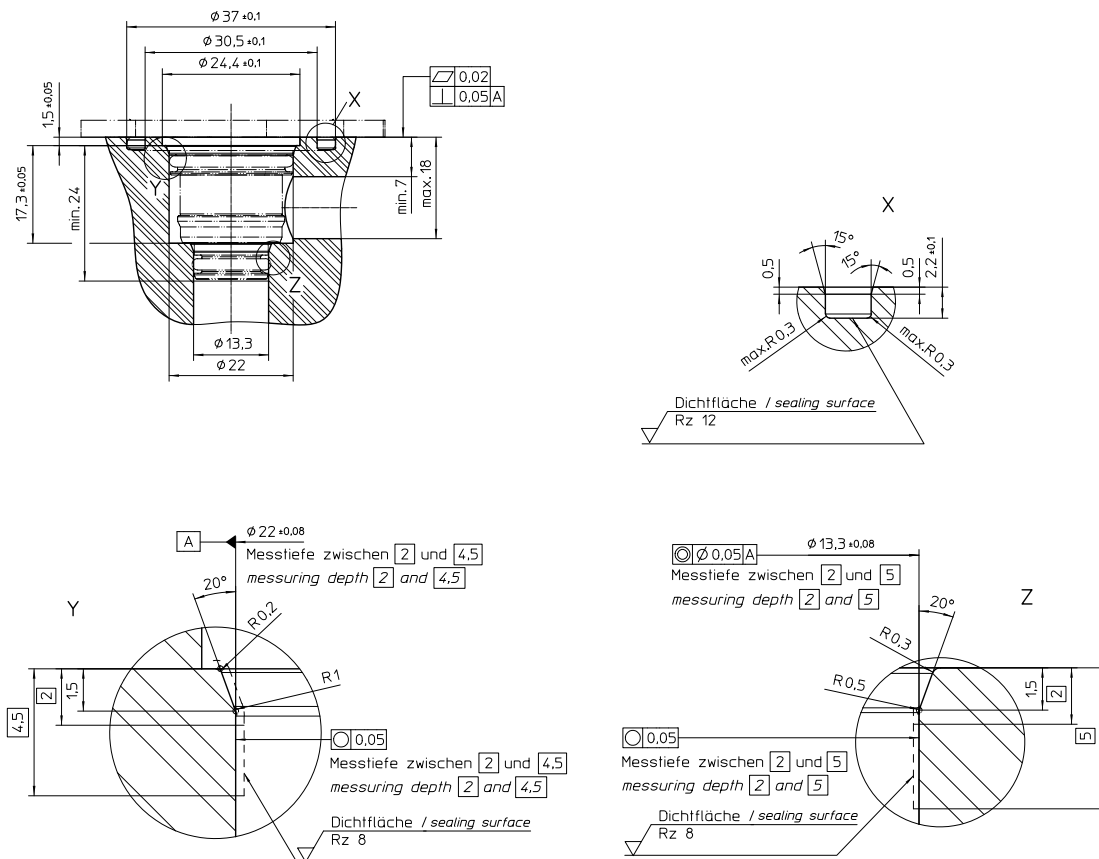


Fig. 6: Connection diagram Type G PC S 040 K69 V03 (G013919 Index g)

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

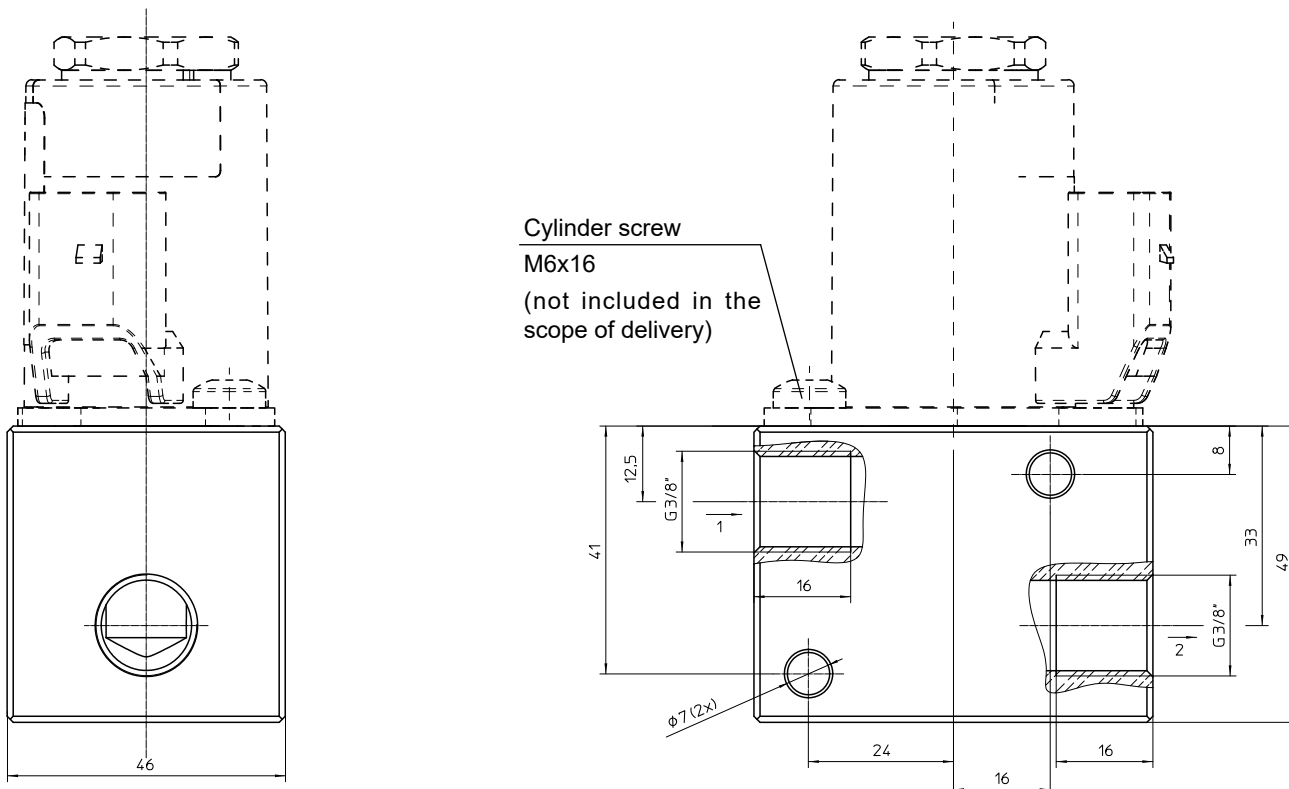
Example

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

¹⁾ optional specification

Accessories

Valve block E-G040-879T1



Order example valve block

Type E-G040-879T1

Material: EN AW-6082T6