

Solenoid operated poppet valve

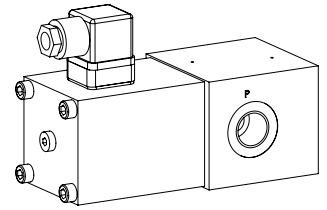
Installation in pipes

- ◆ 2/2-way
- ◆ normally open and normally closed
- ◆ threaded connection 1/2"
- ◆ $Q_{max} = 80 \text{ l/min}$
- ◆ $p_{max} = 350 \text{ bar}$

DESCRIPTION

Direct operated 2/2-way solenoid poppet valve for installation in pipes. By means of the pressure tight switching solenoid, the poppet valve spool is opened or closed acting against the spring. Due to the poppet spool construction with pressure compensation on both sides, the flow through the valve is possible in both directions. The seat spool guide is sealed by means of an O-ring. The metallic sealing seat closes the valve virtually leak free.

NG10

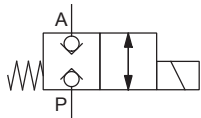


APPLICATION

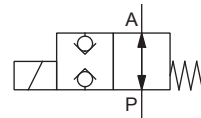
Poppet valves are used where tight closing functions of the valve are essential like leakage-free load holding, clamping or gripping.

SYMBOL

G.22101



G.22100



TYPE CODE

Threaded connection	G				2	2	10	-	-	#	
Solenoid, Medium					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solenoid, Super					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 way (connections)					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 switching positions					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nominal size 10					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normally closed					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normally open					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nominal voltage U_N	12 VDC	<input type="checkbox"/>	115 VAC	<input type="checkbox"/>							
	24 VDC	<input type="checkbox"/>	230 VAC	<input type="checkbox"/>							
Sealing material	NBR	<input type="checkbox"/>									
	FKM (Viton)	<input type="checkbox"/>									
Design index (subject to change)											

1.11-2860

COMMISSIONING

Attention! When commissioning, the valve must be vented under pressure (max. 2 rotations of screw E).



ACTUATION

Actuation	Switching solenoid, wet pin push type, pressure tight
Execution	Medium: SIN60V (Data sheet 1.1-145) Super: SIS60V (Data sheet 1.1-150)
Connection	Connector socket EN 175301 – 803

GENERAL SPECIFICATIONS

Designation	2/2-way poppet valve
Construction	Direct operated
Mounting	Installation in pipes
Nominal size	NG10
Connection	Threaded connection G1/2"
Actuation	Switching solenoid
Ambient temperature	-25...+70 °C (NBR) -20...+70 °C (FKM)
Weight	≤ 4,0 kg
MTTFd	150 years

ELECTRICAL SPECIFICATIONS

Protection class	IP65
Relative duty factor	100 % DF
Switching frequency	15'000 / h
Service life time	10 ⁷ (number of switching cycles, theoretically)
Voltage tolerance	± 10 % with regard to nominal voltage
Standard nominal voltage	12 VDC, 24VDC, 115 VAC, 230 VAC AC = 50 to 60 Hz, rectifier integrated in the connector socket

Note! Other electrical specifications see data sheet 1.1-145 (Medium) and 1.1-150 (Super)



HYDRAULIC SPECIFICATIONS

Working pressure	Medium: $p_{max} = 160$ bar Super: $p_{max} = 350$ bar
Maximum volume flow	$Q_{max} = 80$ l/min, see characteristic
Volume flow direction	Any (see characteristic)
Leakage oil	Seat tight, max. 0,05 ml / min (approx. 1 drop / min) at 30 cSt
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm ² /s...320 mm ² /s
Temperature range fluid	-20...+70 °C
Contamination efficiency	Class 20 / 18 / 14
Filtration	Required filtration grade $\beta_{10...16} \geq 75$, see data sheet 1.0-50

STANDARDS

Solenoids	DIN VDE 0580
Connection execution D	EN 175301 – 803
Protection class	EN 60 529
Contamination efficiency	ISO 4406

SEALING MATERIAL

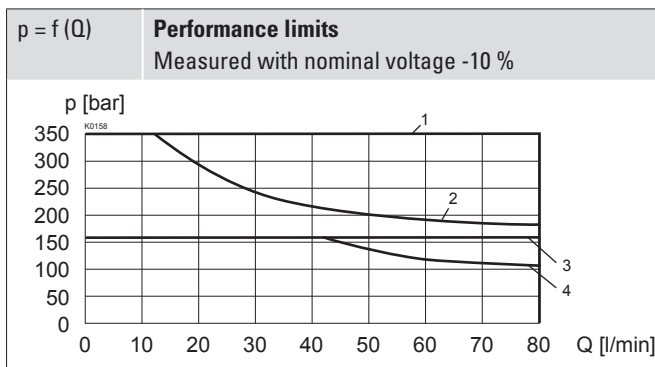
NBR or FKM (Viton) as standard, choice in the type code

SURFACE TREATMENT

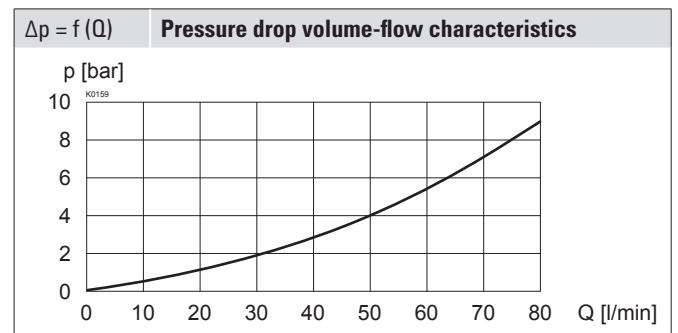
- ◆ The valve body, the solenoid, the cover and the socket head screws are zinc coated

PERFORMANCE SPECIFICATIONS

Oil viscosity $\nu = 30$ mm²/s

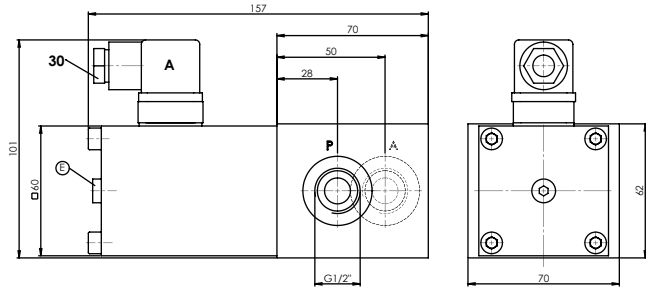
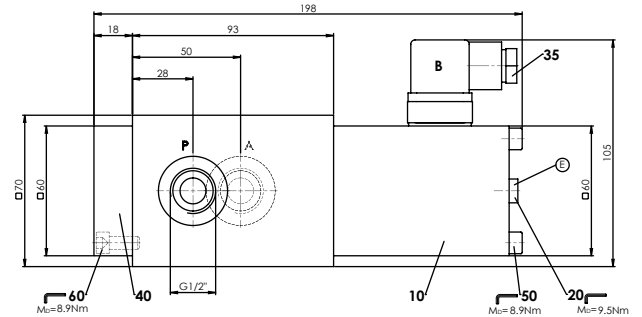


Type	Flow direction	
	P → A	A → P
GM2210.	3	4
GS2210.	1	2



VALVES INSTALLED

The central functioning element is the poppet valve cartridge NG10, data sheet 1.11-2040.

DIMENSIONS
G.22101

G.22100

PARTS LIST

Position	Article	Description
10	260.8...	Solenoid SIN60V
	260.9...	Solenoid SIS60V
20	239.2033	Screw plug HB0 (incl. seal)
30	219.2001	Electric plug A (grey)
35	219.2002	Electric plug B (black)
40	059.2200	Cover
50	246.3190	Socket head screw M6 x 90 DIN 912
60	246.3121	Socket head screw M6 x 20 DIN 912

MANUAL OVERRIDE

Screw plug (HB0), no actuation possible

Optionally: HB8,5; HN(K) or HR(K)

→ See data sheet 1.1-311

INSTALLATION NOTES

Mounting position : Any, preferably horizontal

ACCESSORIES

Technical explanations	Data sheet 1.0-100
Hydraulic fluids	Data sheet 1.0-50
Filtration	Data sheet 1.0-50
Relative duty factor	Data sheet 1.1-430