2/2-WAY SOLENOID VALVE, FORCE PILOT OPERATED IN PISTON DESIGN

Type:

GMV4900

Description:

- 2/2-way valve
- piston design
- force pilot operated
- female thread acc. to ISO228
- duty cycle 100% (VDE0580)
- installation position only with upright solenoid
- connector plug acc. to EN 175301-803 or terminal box (depending on the solenoid design)

Range of application:

- viscosity 22mm²/s
- medium temperature -10°C up to +80°C
- ambient temperature: up to +35°C
- working pressure 0 up to 40bar
- IP65 (with a professionally installed connector socket) according to DIN EN 60529
- for clean, neutral, gasous and liquid media
- no pressure difference required, the valve operates from 0 bar

References:

For contaminated fluids insertion of a strainer is recommended

At operating state temperature the input power of a coil decreases by up to ca. 30% due to physical reasons.

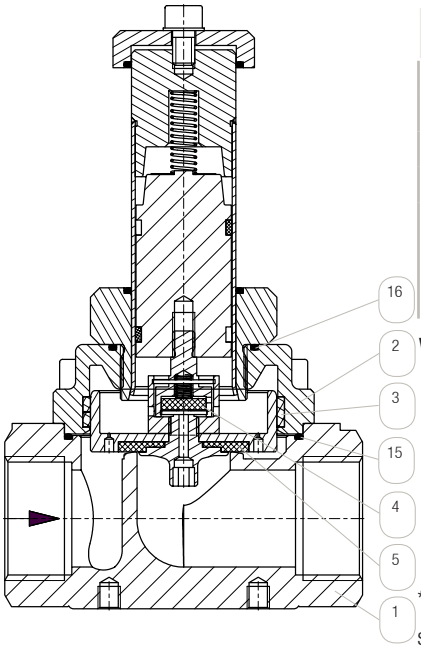
Attention! The conditions imposed on the Ex approvals lead to reduction of the permissible standard temperature ranges in the cases of explosion protected solenoids.

Comments:

The valve is equipped with an adjustable **close muting from size 1 1/4".** Smaller sizes from 3/4" are upgradable. **Voltage tolerance +10% / -10%** at maximum pressure and standard ambient temperature. Please note **the flow direction** (marked with arrow on the body) during installation.

Types with other voltage, coil power or sealing on request! These can be found in the catalog under "spare parts and accessories". Included is the **connector plug acc. to EN 175301-803**. Further connector sockets can be found in the catalog under "square parts and accessories". **Higher protection class** than IP65 is possible with special coils and connector sockets.

Threads according to EN 228: It describes the threaded connection of a parallel male thread with a parallel female thread and is marked with "G".



pos.	part	brass		stainless steel		optional material	
1	body	brass	A	1.4581	O	red brass	
2	cover	brass		1.4581			
3	piston guide ring	PTFE-carbon		PTFE-carbon			
4.5	seat sealing	PTFE		PTFE			
15.16	o-ring	NBR	B	NBR	B	EPDM**	E
						FKM**	V
						PTFE**	T

wear parts*:

- pilot seat
- valve piston (complete)
- guide star
- pilot spindle
- piston ring
- pilot spindle
- nut
- retaining ring
- retaining rings
- o-ring
- springs
- tube
- solenoid
- connector socket

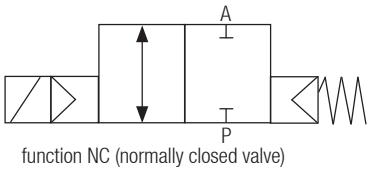
*Wear parts can vary depending on the valve design: Service-set: includes the complete piston; sealing-set: contains all sealings BUT piston and seat sealing.

** **Other medium temperature** for optional sealing possible! If necessary different solenoids are required.

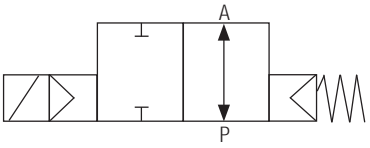
options:

- OF: free of oil and grease
- NPT: pipe thread ANSI B 1.20.1
- NO: opened in rest position
- PS: position indicator from 3/4" with solenoid G08
- EX: expolsion protection acc. to ATEX:
  Ex II 2G EEx em II T4
  Ex II 2G EEx emb II T4
- TH: high temperature design up to +180°C, high temperature design up to +200°C
- HA: manual override
- RS: adjustable close muting (3/4"-1")
- GM: basic quantity setting

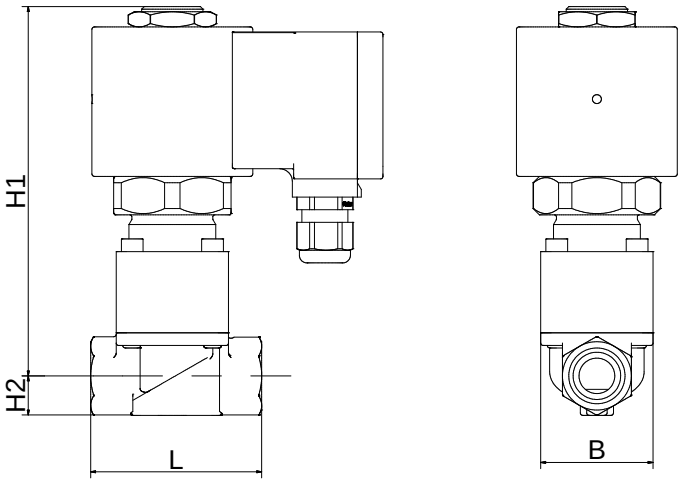
For details about the order code see "Order information". An overview of the complete material code you can find at the beginning of each product section of the product catalogue.



function NC (normally closed valve)



function NO (normally opened valve)



match code	size [inch]	nominal size [mm]	working pressure [bar] min.	working pressure [bar] max.	L [mm]	H1 [mm]	H2 [mm]	B [mm]	weight [kg]	CV* [m³/h]	solenoid power AC*	solenoid power DC
GMV4900-07xB400-G09-x	G1 1/4	40	0	25	140	230	33	96	7.5	n/a	with separate rectifier	46W
GMV4900-08xB400-G09-x	G1 1/2	40	0	25	140	230	33	96	7.5	n/a		46W
GMV4900-09xB500-G09-x	G2	50	0	25	168	240	35	112	8.6	n/a		46W
GMV4900-10xB630-G09-x	G2 1/2	63	0	10	175	205	60	90	9.2	n/a		46W
GMV4900-11xB760-G09-x	G3	76	0	10	200	212	80	105	9.5	n/a		46W

***solenoid power for AC:** listed are the pick-up power and the holding power.

***CV-value:** The nominal flow rate CV according to VDI / VDE 2173 is the water quantity in m³/h for the flow direction with the pressure difference Δp = 1 bar and a medium temperature between +5°C and 30°C.

GMV4900 - [XX] [XX] [X] - [X]-[X] - [XX
1 2 3 4 5 6

Order information:

1: type: GMV4900

2: connection size: 07-11 (see table)

3: materials:

- 1. digit: body material
  A=brass
  O=stainless steel
- 2. digit: sealing
  B=NBR (standard)
  E=EPDM
  V=FKM

4. nominal size in 1/10mm (see table)

5: operation:

- 1. digit (3 digits): specification of solenoid type (see table / options)
- 2. digit: specification of voltage:
  0: 230V AC
  1: 24V DC
  2: 110V AC (on request)
  Other voltage on request.

6: options (see "options")

Please ask for field specifications that are not listed in this data sheet.

Before installation please consider the installation and maintenance manual, especially the safety indications!

Heating and power of solenoid coils

default solenoid valves are designed for continuous operation (100% ED = power-on time) under normal operating conditions. The pulling force of a solenoid coil is basically influenced by three elements:

- the self-heating of the magnet coil
- the medium temperature
- the ambient temperature

Solenoid coils are by default designed for a maximum ambient temperature of +35 °C. This specification applies for the maximum allowable operating pressure specified in the data sheet of the corresponding valve, 100% duty cycle and a medium temperature of +80 °C.

A higher ambient temperature is possible, when lower values are applied for the other influencing parameters. When the max. operation pressure and max. ambient temperature of +50 °C is given the medium temperature is not allowed to be higher than max. +50 °C. In addition to that, deviations from the default design temperature range are possible, e.g. when temperature coils or other constructive measures are used. Please contact the MIT headquarters to discuss the specific application.

More precise specifications and technical data with regard to the operating conditions can be found in the data sheets of the solenoid coils and the solenoid valve regarded. Please observe that the surface temperature of a permanently loaded coil can amount up to +120 °C, solely by the self-heating of the coil. The power consumption of our default solenoid valves was calculated to DIN VDE 05820 for a coil temperature of +20 °C.