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

**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, gaseous and liquid media
- no pressure difference required, the valve operates from 0 bar

**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".

**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 approval lead to reduction of the permissible standard temperature ranges in the cases of explosion protected solenoids.

**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:** explosion protection acc. to ATEX:
  - Ex II 2G Ex e mb II T4
  - Ex II 2G Ex em II T4
- **TH:** high temperature design up to +180°C
- **HA:** manual override
- **RS:** adjustable close muting (3/4”-1")
- **GM:** basic quantity setting
GMV4900 - [XX] [XX] [X] - [X]-[X] - [XX]

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!

*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 ∆p = 1 bar and a medium temperature between +5°C and 30°C.
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.