

# 2/2 Way Solenoid Valve Type 111

direct acting, liquid adsorbed



## Function

- direct acting
- normally closed (NC)

## Mode of operation

- In a deenergized state, the valve is closed by spring force. When energized (magnetic force), the plunger moves upwards, raising the diaphragm connected to it and allowing the medium to flow.

## Design

- seat valve with diaphragm, liquid adsorbed

## Type of fluids

- Technically clean neutral or aggressive fluids or gaseous media provided that the components getting in contact with the medium are resistant at the operating temperature according to the ASV resistance guide.

## Nominal diameter

- DN 2,0 - 6,0

## Pressure range

- 0 - max. 6 bar (see table)

## Viscosity

- up to approx. 37 mm<sup>2</sup>/s (cSt)

## Body material

- PVC-U
- PTFE
- PVDF

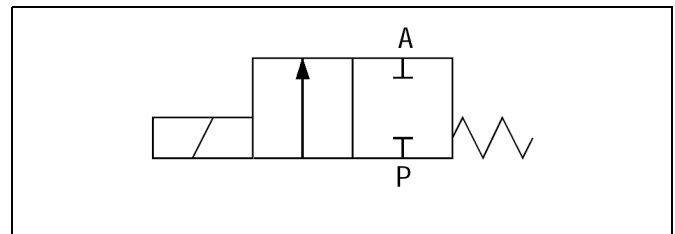
## Seals

- EPDM
- FPM

## Ambient temperature

- max. +50°C

## Wiring scheme



## Media temperature

- see pressure/temperature diagram

## Connections

- PVC-U: spigot end for solvent welding d 16 mm
- PVDF: spigot end for fusion welding d 16 mm
- PTFE: female threaded socket G 1/4"

## Weight

- 360 g

## Electrical part

### Plug socket

- acc. to DIN EN 175301-803

### Nominal voltage

- 230 V 50 Hz
- 24 V DC
- special voltages on request

### Voltage tolerance

- ±10% acc. to VDE 0580

### Power consumption

- 230 V 50 Hz: 11 VA
- 24 V DC: 9 watt

### Duty factor

- 100% ED

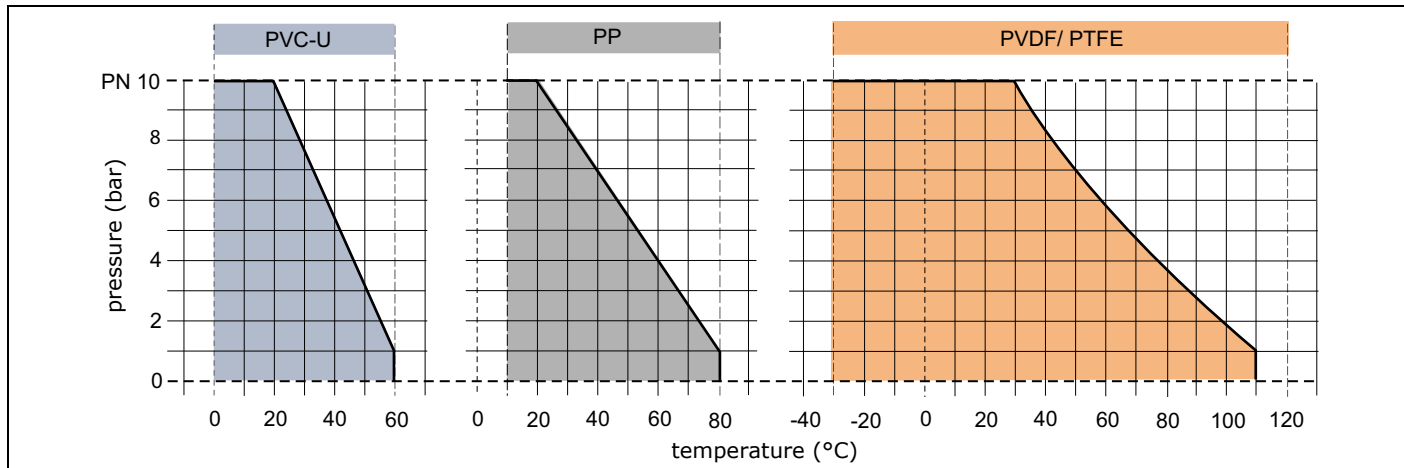
## Switching times

- opening: 30 - 40 ms
- closing: 40 - 50 ms

## Protection

- IP 65 with plug socket mounted
- EEXM II T4 execution on request!

## Pressure/temperature diagram



## Pressure/temperature diagram

The pressure/temperature limits are applicable for the stated nominal pressures and a computed operating life factor of 25 years.

The values are a guide for harmless media (DIN 2403), to which the material of the valve is resistant. For other media see the ASV resistance guide.

The durability of wear and tear parts depends on the operating conditions of the application.

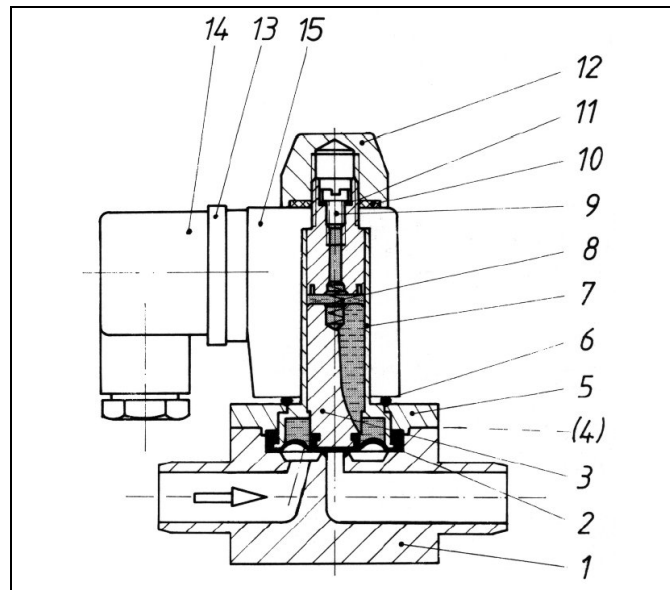
For temperatures below 0°C (PP < +10°C) please specify the precise operating conditions of the application.

## NOTE

For direct current the operating pressure is reduced by about 20 %.  
For AC connection, the plug socket is equipped with integrated rectifier as standard. ✓

## Mounting

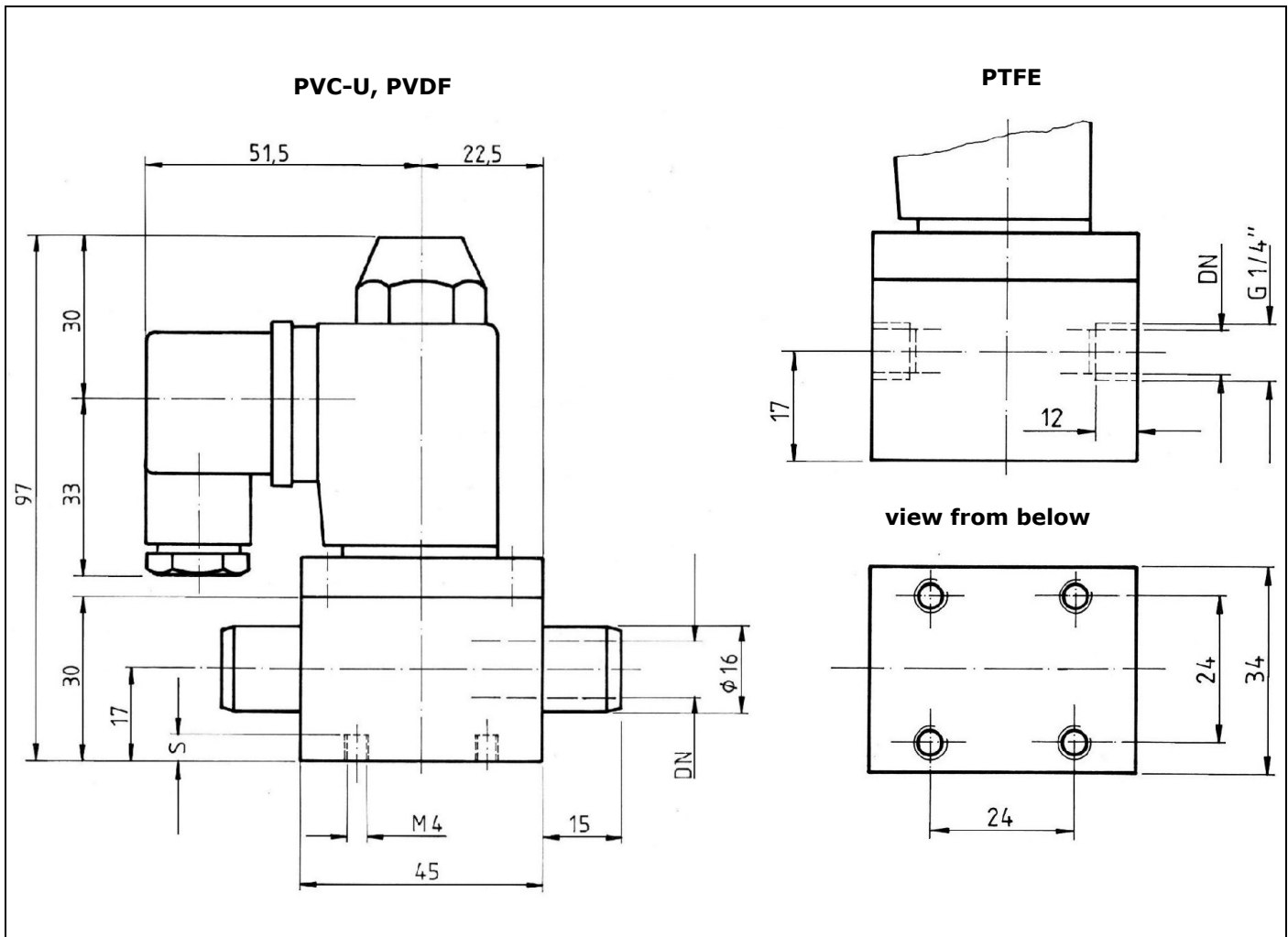
Coil preferably in upright position, arrow always in direction of flow.



|    |                    |
|----|--------------------|
| 1  | valve body         |
| 2  | diaphragm          |
| 3  | plunger            |
| 4  | connection screws  |
| 5  | flange             |
| 6  | O-ring             |
| 7  | plunger guide tube |
| 8  | spring             |
| 9  | oil screw          |
| 10 | gasket             |
| 11 | O-ring             |
| 12 | acorn nut          |
| 13 | frame seal         |
| 14 | cable plug         |
| 15 | coil               |

## Sectional drawing and parts list

**Dimensional drawing**



**Ident number**

**Body PVC-U**

| voltage |            |          |                       | 230 V AC |       | 24 V DC |       |
|---------|------------|----------|-----------------------|----------|-------|---------|-------|
| DN      | connection | pressure | k <sub>v</sub> -value | PVC-U    |       | PVC-U   |       |
| (mm)    | d (mm)     | (bar)    | (l/min)               | EPDM     | FPM   | EPDM    | FPM   |
| 2       | 16         | 0 - 6    | 2,1                   | 69168    | 69170 | 69169   | 69171 |
| 4       | 16         | 0 - 4    | 6,0                   | 69172    | 69174 | 69173   | 69175 |
| 6       | 16         | 0 - 2    | 9,5                   | 69176    | 69178 | 69177   | 69179 |

**Body PVDF**

| voltage |            |          |                       | 230 V AC |       | 24 V DC |       |
|---------|------------|----------|-----------------------|----------|-------|---------|-------|
| DN      | connection | pressure | k <sub>v</sub> -value | PVDF     |       | PVDF    |       |
| (mm)    | d (mm)     | (bar)    | (l/min)               | EPDM     | FPM   | EPDM    | FPM   |
| 2       | 16         | 0 - 6    | 2,1                   | 43078    | 43081 | 44983   | 44989 |
| 4       | 16         | 0 - 4    | 6,0                   | 43079    | 43082 | 44984   | 44990 |
| 6       | 16         | 0 - 2    | 9,5                   | 43080    | 43083 | 44985   | 44991 |

**Body PTFE**

| voltage |            |          |                       | 230 V AC |       | 24 V DC |       |
|---------|------------|----------|-----------------------|----------|-------|---------|-------|
| DN      | connection | pressure | k <sub>v</sub> -value | PTFE     |       | PTFE    |       |
| (mm)    | G (inch)   | (bar)    | (l/min)               | EPDM     | FPM   | EPDM    | FPM   |
| 2       | 1/4        | 0 - 6    | 2,1                   | 69180    | 69182 | 69181   | 69183 |
| 4       | 1/4        | 0 - 4    | 6,0                   | 69184    | 69186 | 69185   | 69187 |
| 6       | 1/4        | 0 - 2    | 9,5                   | 69188    | 69190 | 69189   | 69191 |

Subject to technical modifications

