

# Media separated solenoid valve VYKA-F7-M22U-12-PF-5YQ7

Part number: 8170089

**FESTO**



 [General operating condition](#)

## Data sheet

| Feature                                               | Value                                                                                                               |
|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Structural design                                     | Rocker valve with diaphragm seal                                                                                    |
| Sealing principle                                     | Soft                                                                                                                |
| Materials in contact with the media                   | FFPM<br>PEEK                                                                                                        |
| Valve function                                        | 2/2, open, monostable                                                                                               |
| Nominal width                                         | 1.2 mm                                                                                                              |
| Flow direction                                        | Reversible with restrictions                                                                                        |
| Actuation type                                        | Electrical                                                                                                          |
| Type of control                                       | Direct                                                                                                              |
| Reset method                                          | Mechanical spring                                                                                                   |
| Manual override                                       | None                                                                                                                |
| Mounting position                                     | Any                                                                                                                 |
| Type of mounting                                      | With through-hole for M2 screw                                                                                      |
| Electrical connection 1, connection type              | Socket                                                                                                              |
| Electrical connection 1, connection technology        | Connection diagram Q7                                                                                               |
| Electrical connection 1, number of pins/wires         | 2                                                                                                                   |
| Electrical connection for input 1, connection pattern | 00997312                                                                                                            |
| Size                                                  | 7                                                                                                                   |
| Width dimension                                       | 7.5 mm                                                                                                              |
| Fluid connector                                       | Flange                                                                                                              |
| Medium                                                | Liquid media<br>Gaseous media                                                                                       |
| Information on medium                                 | Observe resistance of materials that come into contact with media<br>Maximum particle size 5 µm                     |
| Internal volume                                       | 18 µl fluid chamber valve<br>24 µl valve with fluid connections                                                     |
| Temperature of liquid media                           | 15 °C ... 50 °C                                                                                                     |
| Medium temperature gaseous media                      | 15 °C ... 50 °C                                                                                                     |
| Ambient temperature                                   | 15 °C ... 50 °C                                                                                                     |
| Storage temperature                                   | -20 °C ... 70 °C                                                                                                    |
| Medium pressure                                       | -0.05 MPa ... 0.2 MPa                                                                                               |
| Medium pressure                                       | -0.5 bar ... 2 bar                                                                                                  |
| Medium pressure                                       | -7.25 psi ... 29 psi                                                                                                |
| Note on the medium pressure                           | IN: -0.25 – 2 bar / -0.025 – 0.2 MPa / -3.625 – 29 psi<br>OUT: -0.5 - 0.5 bar / -0.05 - 0.05 MPa / -7.25 - 7.25 psi |
| Pressure difference                                   | 0.2 MPa                                                                                                             |
| Differential pressure                                 | 2 bar                                                                                                               |

| Feature                                    | Value                                                                                                                                                                                                        |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pressure difference                        | 29 psi                                                                                                                                                                                                       |
| Burst pressure                             | 2.3 MPa                                                                                                                                                                                                      |
| Burst pressure                             | 23 bar                                                                                                                                                                                                       |
| Burst pressure                             | 333.5 psi                                                                                                                                                                                                    |
| DC operating voltage range                 | 12 V ... 26 V                                                                                                                                                                                                |
| Note on operating voltage range DC         | With electrical sub-base VAVE-K1-...                                                                                                                                                                         |
| Permissible voltage fluctuations           | +/- 10 %                                                                                                                                                                                                     |
| Electrical power consumption               | 3.5 W                                                                                                                                                                                                        |
| Note on power consumption                  | Low-current phase 0.3 W, high-current phase 3.5 W for 60 ms, in combination with VAVE-K1-...                                                                                                                 |
| Coil characteristics                       | 12 - 26 V DC: low-current phase 0.06 W, high-current phase 2.2 W                                                                                                                                             |
| Insulation class                           | B                                                                                                                                                                                                            |
| Duty cycle                                 | 100% in combination with holding current reduction<br>Follow the instructions on operating the air solenoid valves.                                                                                          |
| Max. switching frequency                   | 6 Hz                                                                                                                                                                                                         |
| Note on switching frequency                | Dependent on the ambient temperature and installation state<br>At 100% duty cycle depending on ambient temperature and installation condition. Higher switching frequencies possible with duty cycle < 100%. |
| Response time "off" for liquid media       | 9 ms                                                                                                                                                                                                         |
| Switching time off gaseous media           | 9 ms                                                                                                                                                                                                         |
| Note on the switching time                 | Switching time depends on medium, temperature, medium pressure and individual operating conditions<br>FFPM can exhibit slower switching behavior at temperatures below room temperature                      |
| Standard nominal flow rate                 | 10 l/min                                                                                                                                                                                                     |
| Note on standard nominal flow rate         | At a pressure drop of 1 -> 0 bar (gaseous media)                                                                                                                                                             |
| Flow rate Kv                               | 0.018 m³/h                                                                                                                                                                                                   |
| Flow rate Kv                               | 0.3 l/min                                                                                                                                                                                                    |
| Note on flow rate Kv                       | For the medium water<br>Pressure difference 1 bar                                                                                                                                                            |
| Water flow rate at max. operating pressure | 0.024 m³/h<br>0.40 l/min                                                                                                                                                                                     |
| Symbol                                     | 00995700                                                                                                                                                                                                     |
| Housing material                           | PA-reinforced<br>PEEK<br>PPA-reinforced                                                                                                                                                                      |
| Diaphragm material                         | FFPM                                                                                                                                                                                                         |
| Seals material                             | FFPM                                                                                                                                                                                                         |
| Note on materials                          | RoHS-compliant                                                                                                                                                                                               |
| LABS (PWIS) conformity                     | VDMA24364 zone III                                                                                                                                                                                           |
| Product weight                             | 10.9 g                                                                                                                                                                                                       |
| Degree of protection                       | IP40                                                                                                                                                                                                         |
| Note on degree of protection               | In mounted state                                                                                                                                                                                             |
| Application note                           | For indoor use only                                                                                                                                                                                          |
| Corrosion resistance class (CRC)           | 0 - No corrosion stress                                                                                                                                                                                      |