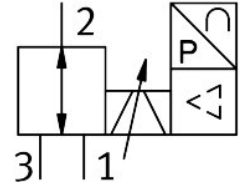


# Proportional pressure control valve VPPI-5L-3-G18-1V1H-V1-S1D

Part number: 8104673

**FESTO**



## Data sheet

| Feature                                           | Value                                     |
|---------------------------------------------------|-------------------------------------------|
| Nominal width pressurization                      | 5 mm                                      |
| Exhaust nominal width                             | 5 mm                                      |
| Actuation type                                    | Electrical                                |
| Sealing principle                                 | Soft                                      |
| Total leakage                                     | 5 l/h                                     |
| Flow direction                                    | Non-reversible                            |
| Mounting position                                 | Any                                       |
| Structural design                                 | Poppet valve with spring return           |
| Short-circuit protection                          | For all electrical connections            |
| Max. cable length                                 | 30 m                                      |
| Setpoint input                                    | 0 - 10 V<br>PWM<br>digital                |
| Input resistance                                  | 100 kOhm                                  |
| Safety instructions                               | Safety position VPPI, normally closed     |
| Reverse polarity protection                       | for all electrical connections            |
| Reset method                                      | Mechanical spring                         |
| Dimensions W x L x H                              | 42.2 mm x 95.3 mm x 94.3 mm               |
| Type of control                                   | directly                                  |
| Valve function                                    | 3-way proportional pressure control valve |
| Display type                                      | Color TFT                                 |
| Display size                                      | 1.77"                                     |
| Display resolution                                | 128x160 pixels                            |
| Operating pressure                                | 1 bar...2 bar                             |
| Pressure regulation range MPa                     | -0.1 MPa...0.1 MPa                        |
| Pressure regulation range                         | -1 bar...1 bar                            |
| Inlet pressure 1                                  | 0 bar...6 bar                             |
| Inlet pressure 1 MPa                              | 0 MPa...0.6 MPa                           |
| Inlet pressure 3                                  | -0.1 MPa...0 MPa<br>-1 bar...0 bar        |
| Burst pressure                                    | 40 bar                                    |
| Normal nominal flow rate (normalized to DIN 1343) | 150 l/min                                 |

| Feature                                                   | Value                                                                                                                               |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Standard nominal flow rate 2-3                            | 20 l/min                                                                                                                            |
| DC operating voltage range                                | 21.6 V...27.6 V                                                                                                                     |
| Nominal current                                           | 0.15 A                                                                                                                              |
| Max. current consumption                                  | 525 mA                                                                                                                              |
| Max. electrical power consumption                         | 14.5 W                                                                                                                              |
| Nominal operating voltage DC                              | 24 V                                                                                                                                |
| Switching output                                          | Push-pull                                                                                                                           |
| Max. output current                                       | 25 mA                                                                                                                               |
| Analog output signal range                                | 0 - 10 V                                                                                                                            |
| Min. load resistance of voltage output                    | 2000 Ohm                                                                                                                            |
| Precision analog output in $\pm$ %FS                      | 1 %FS                                                                                                                               |
| Operating medium                                          | Compressed air as per ISO 8573-1:2010 [7:4:4]<br>Inert gases                                                                        |
| Information on operating and pilot media                  | Operation with oil lubrication not possible                                                                                         |
| Certification                                             | RCM compliance mark<br>c UL us - Listed (OL)                                                                                        |
| KC characters                                             | KC-EMV                                                                                                                              |
| CE marking (see declaration of conformity)                | As per EU EMC directive<br>As per EU RoHS directive                                                                                 |
| UKCA marking (see declaration of conformity)              | To UK instructions for EMC<br>To UK RoHS instructions                                                                               |
| Certificate issuing authority                             | UL E322346                                                                                                                          |
| Vibration resistance                                      | Transport application test with severity level 2 as per FN 942017-4 and EN 60068-2-6                                                |
| Shock resistance                                          | Shock test with severity level 2 as per FN 942017-5 and EN 60068-2-27                                                               |
| Corrosion resistance class (CRC)                          | 2 - Moderate corrosion stress                                                                                                       |
| LABS (PWIS) conformity                                    | VDMA24364-B1/B2-L                                                                                                                   |
| Cleanroom suitability, measured according to ISO 14644-14 | Class 4 according to ISO 14644-1                                                                                                    |
| For use in the food industry                              | See supplementary material information                                                                                              |
| Temperature of medium                                     | 0 °C...50 °C                                                                                                                        |
| Degree of protection                                      | IP65                                                                                                                                |
| Contamination level                                       | 2                                                                                                                                   |
| Ambient temperature                                       | 0 °C...50 °C                                                                                                                        |
| Storage temperature                                       | -20 °C...70 °C                                                                                                                      |
| Climatic category                                         | 3K3 according to EN 60721                                                                                                           |
| Relative air humidity                                     | 0 - 85%<br>Non-condensating                                                                                                         |
| Nominal altitude of use above sea level                   | < 3000 m NHN                                                                                                                        |
| Application note                                          | The product is suitable for industrial purposes only. Radio interference suppression measures may be required in residential areas. |
| Sound power level                                         | 62.5 dB(A)                                                                                                                          |
| Sound power level at a distance of 1 m                    | 51.9 dB(A)                                                                                                                          |
| Product weight                                            | 370 g                                                                                                                               |
| Linearity                                                 | 0.9 %FS                                                                                                                             |
| Hysteresis                                                | 0.4 %FS                                                                                                                             |
| Reproducibility                                           | 0.4 %FS                                                                                                                             |
| Overall accuracy                                          | 1.1 %FS                                                                                                                             |
| Temperature coefficient                                   | 0.02 %/K                                                                                                                            |
| Electrical connection 1, function                         | Actual value output<br>Setpoint input<br>Power supply                                                                               |
| Electrical connection 1, connection type                  | Plug                                                                                                                                |
| Electrical connection 1, connection technology            | M12x1 A-coded as per EN 61076-2-101                                                                                                 |
| Electrical connection 1, number of pins/wires             | 5                                                                                                                                   |
| Electrical connection 1, tightening torque                | 1.5 Nm                                                                                                                              |

| Feature                                     | Value                                           |
|---------------------------------------------|-------------------------------------------------|
| Type of mounting                            | With through-hole for M4 screw<br>With DIN rail |
| Pneumatic connection 1                      | G1/8                                            |
| Pneumatic connection 2                      | G1/8                                            |
| Pneumatic connection 3                      | G1/8                                            |
| Max. tightening torque of pneumatic fitting | 8.5 Nm                                          |
| Note on materials                           | RoHS compliant                                  |
| Housing material                            | PA-reinforced                                   |
| Seals material                              | HNBR<br>PTFE                                    |