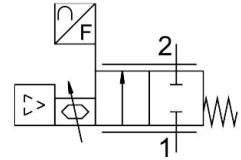


# Proportional flow control valve VEMD-L-6-60-200-D9-G14-5YMPM1D-VA

Part number: 8163830

**FESTO**



[PDF](#) General operating condition

## Data sheet

| Feature                                 | Value                                                                                                                                                                                                                                                             |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Size                                    | 100                                                                                                                                                                                                                                                               |
| Symbol                                  | 00995693                                                                                                                                                                                                                                                          |
| Degree of protection                    | IP40                                                                                                                                                                                                                                                              |
| Standard nominal flow rate              | 200 l/min                                                                                                                                                                                                                                                         |
| Flow rate control range                 | 4 l/min ... 200 l/min                                                                                                                                                                                                                                             |
| Flow direction                          | Non-reversible                                                                                                                                                                                                                                                    |
| Nominal operating pressure              | 0.3 MPa                                                                                                                                                                                                                                                           |
| Nominal operating pressure              | 3 bar                                                                                                                                                                                                                                                             |
| Nominal operating pressure              | 43.5 psi                                                                                                                                                                                                                                                          |
| Operating pressure                      | 0.1 MPa ... 0.6 MPa                                                                                                                                                                                                                                               |
| Operating pressure                      | 1 bar ... 6 bar                                                                                                                                                                                                                                                   |
| Information on operating pressure       | For inlet pressures above 0,4 MPa (4 bar, 58 psi) and low flow rates: Avoid components in the pneumatic laminar flow inlet that reflect pressure waves. The reflection of pressure waves can lead to vibrations in the system and to accuracy deviations in the p |
| Overload pressure                       | 0.8 MPa                                                                                                                                                                                                                                                           |
| Overload pressure                       | 8 bar                                                                                                                                                                                                                                                             |
| Overload pressure                       | 116 psi                                                                                                                                                                                                                                                           |
| Burst pressure                          | 1.8 MPa                                                                                                                                                                                                                                                           |
| Burst pressure                          | 18 bar                                                                                                                                                                                                                                                            |
| Burst pressure                          | 261 psi                                                                                                                                                                                                                                                           |
| Accuracy of flow rate                   | ± (2% o.m.v. + 1% FS)                                                                                                                                                                                                                                             |
| Repetition accuracy of flow rate value  | ± (0.25 % o.m.v. + 0.25 %FS)                                                                                                                                                                                                                                      |
| Maximum permissible leakage             | 0.6 l/h                                                                                                                                                                                                                                                           |
| Valve function                          | 2-way proportional flow control valve                                                                                                                                                                                                                             |
| Nominal width                           | 6 mm                                                                                                                                                                                                                                                              |
| Actuation type                          | Electrical                                                                                                                                                                                                                                                        |
| Pneumatic connection 1                  | Internal thread G1/4                                                                                                                                                                                                                                              |
| Pneumatic connection 2                  | Internal thread G1/4                                                                                                                                                                                                                                              |
| Ambient conditions                      | Not suitable for use in environments enriched with oxygen according to IEC 60601-1<br>Cleanest possible ambient air<br>Dry                                                                                                                                        |
| Nominal altitude of use above sea level | ≤ 2000 m ASL (≥ 79.5 kPa)                                                                                                                                                                                                                                         |
| Max. installation height                | 2000 m                                                                                                                                                                                                                                                            |

| Feature                                        | Value                                                                                                                                 |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Operating medium                               | Argon<br>Compressed air to ISO 8573-1:2010 [6:4:1]<br>Carbon dioxide<br>Oxygen<br>Nitrogen                                            |
| Information on operating and pilot media       | Operation with oil lubrication not possible<br>Maximum particle size 10 µm                                                            |
| Relative air humidity                          | 0 - 90 %<br>Non-condensing                                                                                                            |
| Pressure dew point                             | -20 °C                                                                                                                                |
| Duty cycle                                     | 100%                                                                                                                                  |
| Temperature of medium                          | 5 °C ... 40 °C                                                                                                                        |
| Ambient temperature                            | 5 °C ... 40 °C                                                                                                                        |
| Storage temperature                            | -20 °C ... 70 °C                                                                                                                      |
| Nominal operating voltage DC                   | 24 V                                                                                                                                  |
| DC operating voltage range                     | 12 V ... 24 V                                                                                                                         |
| Max. electrical power consumption              | 8.5 W                                                                                                                                 |
| Electrical connection 1, function              | Communication                                                                                                                         |
| Electrical connection 1, connection type       | Socket                                                                                                                                |
| Electrical connection 1, connection technology | RJ45                                                                                                                                  |
| Electrical connection 1, number of pins/wires  | 8                                                                                                                                     |
| Electrical connection 2, function              | Analog input<br>Communication<br>Power supply                                                                                         |
| Electrical connection 2, connection type       | Plug                                                                                                                                  |
| Electrical connection 2, connection technology | Sub-D                                                                                                                                 |
| Electrical connection 2, number of pins/wires  | 9                                                                                                                                     |
| Reference value                                | 4 - 20 mA<br>0 - 10 V<br>1 - 5 V<br>Modbus®                                                                                           |
| Diagnostic function                            | Indication via LED                                                                                                                    |
| Display type                                   | LED<br>Color TFT                                                                                                                      |
| Analog input signal range                      | 0 - 10 V<br>4 - 20 mA<br>1 - 5 V                                                                                                      |
| Analog output signal range                     | 0 - 10 V<br>1 - 5 V<br>4 - 20 mA                                                                                                      |
| Reverse polarity protection                    | for operating voltage connections                                                                                                     |
| Product weight                                 | 630 g                                                                                                                                 |
| Materials in contact with the media            | Wrought aluminum alloy, anodized<br>EPDM<br>Epoxy<br>FPM<br>PA-reinforced<br>Silicon<br>Silicon nitride<br>High-alloy stainless steel |
| Seals material                                 | EPDM<br>FPM                                                                                                                           |
| Housing material                               | Aluminum, anodized<br>PA-reinforced<br>PC<br>POM                                                                                      |
| Note on materials                              | RoHS-compliant                                                                                                                        |
| Dimensions W x L x H                           | 116 mm x 38 mm x 124 mm                                                                                                               |

| Feature                                      | Value                                                                                                                                             |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Type of mounting                             | Direct mounting via through-hole<br>Mounting plate, screwed on<br>On H-rail with accessories<br>Screwed tightly<br>With through-hole for M4 screw |
| Mounting position                            | Any                                                                                                                                               |
| Certification                                | C-Tick<br>RCM compliance mark<br>c UL us - Listed (OL)                                                                                            |
| Conforms to standard                         | IEC 61010-1<br>ISO 15001                                                                                                                          |
| KC characters                                | KC EMC                                                                                                                                            |
| 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                                                                                                                                        |
| LABS (PWIS) conformity                       | VDMA24364 zone III                                                                                                                                |
| Oxygen suitability according to standard     | ASTM G 63<br>ASTM G 93<br>ASTM G 94<br>CGA G 4.1<br>EIGA IGC 33/06/E<br>ISO 15001                                                                 |