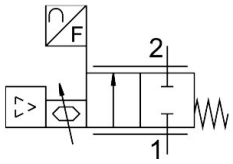
# Mass flow controller (MFC)
# VEMD-L-6-10-10-D9-G14-5YMPM1-VA

Part number: 8163821






## Data sheet

| Feature | Value |
|---|---|
| Size | 100 |
| Degree of protection | IP40 |
| Standard nominal flow rate (standardised to DIN 1343) | 10 l/min |
| Flow rate control range | 0.1 l/min...10 l/min |
| Flow direction | Non-reversible |
| Nominal operating pressure | 0.3 MPa<br>43.5 psi |
| Operating pressure | 0.1 MPa...0.6 MPa<br>1 bar...6 bar |
| Note on operating pressure | For input pressures above 4 bar and low flow rates: Do not use components that reflect pressure waves in the pneumatic laminar flow inlet. The reflection of pressure waves can cause vibrations in the system and deviations in the accuracy of the product. |
| Overload pressure | 0.8 MPa<br>8 bar<br>116 psi |
| Burst pressure | 1.8 MPa<br>18 bar<br>261 psi |
| Accuracy of flow rate | ± (1.3% read + 0.7% FS) |
| Note on accuracy of flow rate | In the range 2 ... 100% FS, reference conditions: ambient temperature and temperature of medium 23°C, medium: compressed air to ISO 8573-1:2010 [6:4:1], with push-in fitting QS-G1/4-8, input pressure p1: 0.27 MPa, output pressure p2: 0.10 MPa |
| Repetition accuracy of flow rate | ± (0.1% read + 0.1% FS) |
| Valve function | 2-way proportional flow control valve<br>Closed |
| Nominal size | 1 mm |
| Type of actuation | Electrical |
| Pneumatic connection, port 1 | Female thread G1/4 |
| Pneumatic connection, port 2 | Female thread G1/4 |
| Typical precision flow rate value | ± (0.6 % read + 0.5 %FS) |
| Environmental conditions | Not suitable for use in an environment enriched with oxygen to IEC 60601-1<br>Cleanest possible ambient air<br>dry |

| Feature | Value |
|---|---|
| Nominal altitude of use | <= 2000 m ASL (> 79.5 kPa) |
| Max. installation height | 2000 m |
| Operating medium | Argon<br>Compressed air to ISO 8573-1:2010 [6:4:1]<br>Carbon dioxide<br>Oxygen<br>Nitrogen |
| Note on operating and pilot medium | Lubricated operation not possible<br>Maximum particle size 10 µm |
| Relative air humidity | 0 - 90%<br>Non-condensing |
| Pressure dew point | -20 °C |
| Duty cycle | 100% |
| Media temperature | 5 °C...40 °C |
| Ambient temperature | 5 °C...40 °C |
| Storage temperature | -20 °C...70 °C |
| Nominal operating voltage DC | 24 V |
| Operational voltage range DC | 12 V...24 V |
| Max. electrical power consumption | 8.5 W |
| Setpoint value | 4 - 20 mA<br>0 - 10 V<br>1 - 5 V<br>Modbus® |
| Diagnostic function | Display via LED |
| Display type | LED |
| Signal range analogue input | 0 - 10 V<br>4 - 20 mA<br>1 - 5 V |
| Signal range analogue output | 0 - 10 V<br>1 - 5 V<br>4 - 20 mA |
| Reverse polarity protection | For operating voltage connections |
| Product weight | 630 g |
| Material in contact with the medium | Anodised wrought aluminium alloy<br>EPDM<br>Epoxy<br>Fluoro rubber<br>Reinforced PA<br>PFPE grease with anorganic thickeners<br>Silicon<br>Silicon nitride<br>High-alloy stainless steel |
| Material housing | Anodised aluminium<br>Reinforced PA<br>Makrolon® |
| Note on materials | RoHS compliant |
| Dimensions (W x L x H) | 116 mm x 38 mm x 124 mm |
| Type of mounting | Direct mounting via through-hole<br>Mounting plate, attached with screws<br>On DIN rail via accessories<br>Screw-clamped<br>Via through-hole for M4 screw |
| Mounting position | Any |
| Approval | C-Tick<br>RCM<br>c UL us - Listed (Oil) |
| Conforms to standard | IEC 61010-1<br>ISO 15001 |
| KC mark | KC-EMV |
| CE mark (see declaration of conformity) | To EU EMC Directive<br>In accordance with EU RoHS Directive |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC |

| Feature | Value |
|---|---|
| | To UK RoHS instructions |
| 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 |