

# Valve manifold VTEP-

Part number: 8176050

**FESTO**



## Data sheet

| Feature                                            | Value                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Valve manifold design                              | Fixed grid                                                                                                                                                                                                                                                                                                |
| Width dimension                                    | 16 mm                                                                                                                                                                                                                                                                                                     |
| Max. no. of valve positions                        | 5                                                                                                                                                                                                                                                                                                         |
| Dimensions W x L x H                               | 119 mm x 110 mm x 82 mm<br>71 mm x 110 mm x 82 mm<br>87 mm x 110 mm x 82 mm                                                                                                                                                                                                                               |
| Application note                                   | The product is suitable for industrial purposes only. Radio interference suppression measures may be required in residential areas.<br>For indoor use only                                                                                                                                                |
| Max. no. of pressure zones                         | 1                                                                                                                                                                                                                                                                                                         |
| Degree of protection                               | IP20                                                                                                                                                                                                                                                                                                      |
| LABS (PWIS) conformity                             | VDMA24364 Zone III                                                                                                                                                                                                                                                                                        |
| Suitability for the production of Li-ion batteries | Suitable for battery production with reduced Cu/Zn/Ni values (F1a)                                                                                                                                                                                                                                        |
| Contamination level                                | 2                                                                                                                                                                                                                                                                                                         |
| Note on materials                                  | RoHS compliant                                                                                                                                                                                                                                                                                            |
| Seals material                                     | NBR                                                                                                                                                                                                                                                                                                       |
| Material fire test                                 | UL94 HB                                                                                                                                                                                                                                                                                                   |
| Nominal altitude of use above sea level            | < 3000 m NHN                                                                                                                                                                                                                                                                                              |
| Operating medium                                   | Compressed air as per ISO 8573-1:2010 [7:4:4]<br>Inert gases<br>Oxygen                                                                                                                                                                                                                                    |
| Information on operating and pilot media           | Operation with oil lubrication not possible<br>Condensation in the valve not allowed<br>if the operating medium contains concentrated oxygen, sufficient ventilation with ambient air must be ensured in order to avoid increased oxygen concentrations in the environment<br>Maximum particle size 40 µm |
| Inlet pressure 1 MPa                               | 0 MPa...0.7 MPa                                                                                                                                                                                                                                                                                           |
| Inlet pressure 1                                   | 0 bar...7 bar                                                                                                                                                                                                                                                                                             |
| Inlet pressure 1 psi                               | 0 psi...101.5 psi                                                                                                                                                                                                                                                                                         |
| Inlet pressure 3                                   | -0.1 MPa...0 MPa<br>-1 bar...0 bar<br>-14.5 psi...0 psi                                                                                                                                                                                                                                                   |
| Operating pressure                                 | 0.2 MPa...0.7 MPa<br>2 bar...7 bar<br>29 psi...101.5 psi                                                                                                                                                                                                                                                  |

| Feature                                                 | Value                                                                                                                                                                                                                         |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pressure regulation range MPa                           | -0.1 MPa...0.6 MPa                                                                                                                                                                                                            |
| Pressure regulation range                               | -1 bar...6 bar                                                                                                                                                                                                                |
| Pressure regulation range psi                           | -14.5 psi...87 psi                                                                                                                                                                                                            |
| Information on operating pressure                       | recommended inlet pressure 1 to achieve the specified flow rate                                                                                                                                                               |
| Information on pressure regulation range                | Effective pressure regulation range between 10 hPa above input pressure 3 and 10 hPa below input pressure 1. Recommended pressure regulation range between 50 hPa above inlet pressure 3 and 1000 hPa below inlet pressure 1. |
| Burst pressure                                          | 2.1 MPa<br>21 bar<br>304.5 psi                                                                                                                                                                                                |
| Valve function                                          | 3-way proportional pressure control valve closed                                                                                                                                                                              |
| Actuation type                                          | Electrical                                                                                                                                                                                                                    |
| Sealing principle                                       | Soft                                                                                                                                                                                                                          |
| Standard flow rate (standardized according to DIN 1343) | 18 l/min...42 l/min                                                                                                                                                                                                           |
| Flow direction                                          | Non-reversible                                                                                                                                                                                                                |
| Suitability for vacuum                                  | Yes                                                                                                                                                                                                                           |
| Reverse polarity protection                             | for all electrical connections                                                                                                                                                                                                |
| Display type                                            | LED                                                                                                                                                                                                                           |
| Setpoint input                                          | digital                                                                                                                                                                                                                       |
| Fieldbus interface, connection type                     | 2x port                                                                                                                                                                                                                       |
| Fieldbus interface, connection technology               | RJ45                                                                                                                                                                                                                          |
| Fieldbus interface, protocol                            | EtherCAT                                                                                                                                                                                                                      |
| Electrical connection 1, function                       | Power supply                                                                                                                                                                                                                  |
| Electrical connection 1, connection type                | Socket                                                                                                                                                                                                                        |
| Electrical connection 1, connection technology          | Terminal strip                                                                                                                                                                                                                |
| Electrical connection 1, number of pins/wires           | 3                                                                                                                                                                                                                             |
| Electrical connection 1, conductor cross section        | 0.2 mm <sup>2</sup> ...1.5 mm <sup>2</sup>                                                                                                                                                                                    |
| Electrical connection 2, function                       | Digital input                                                                                                                                                                                                                 |
| Electrical connection 2, connection type                | Socket                                                                                                                                                                                                                        |
| Electrical connection 2, connection technology          | Terminal strip                                                                                                                                                                                                                |
| Electrical connection 2, number of pins/wires           | 2                                                                                                                                                                                                                             |
| Electrical connection 2, conductor cross section        | 0.2 mm <sup>2</sup> ...1.5 mm <sup>2</sup>                                                                                                                                                                                    |
| Overvoltage category                                    | II                                                                                                                                                                                                                            |
| Nominal operating voltage DC                            | 24 V                                                                                                                                                                                                                          |
| DC operating voltage range                              | 20.4 V...27.6 V                                                                                                                                                                                                               |
| Max. current consumption                                | 250 mA                                                                                                                                                                                                                        |
| Protection against direct and indirect contact          | PELV                                                                                                                                                                                                                          |
| Max. electrical power consumption                       | 6 W                                                                                                                                                                                                                           |
| Residual ripple                                         | ±10 %                                                                                                                                                                                                                         |
| Buffer time for voltage failure of logic supply         | 10 ms                                                                                                                                                                                                                         |
| Certification                                           | RCM compliance mark                                                                                                                                                                                                           |
| 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                                                                                                                                                                         |
| Corrosion resistance class (CRC)                        | 2 - Moderate corrosion stress                                                                                                                                                                                                 |
| Storage temperature                                     | -20 °C...60 °C                                                                                                                                                                                                                |
| Temperature of medium                                   | 5 °C...50 °C                                                                                                                                                                                                                  |
| Ambient temperature                                     | 5 °C...50 °C                                                                                                                                                                                                                  |
| Relative air humidity                                   | 5 - 85%<br>Non-condensating                                                                                                                                                                                                   |
| Climatic category                                       | 3K22 as per EN 60721                                                                                                                                                                                                          |

| Feature                | Value                                                                                |
|------------------------|--------------------------------------------------------------------------------------|
| 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                |
| Linearity              | 0.2 %FS...0.3 %FS                                                                    |
| Hysteresis             | 0.4 %FS                                                                              |
| Reproducibility        | 0.3 %FS...0.4 %FS                                                                    |
| Overall accuracy       | 0.4 %FS<br>0.5 %FS                                                                   |
| Pneumatic connection 2 | for pneumatic tubing outside diameter 4 mm                                           |
| Pneumatic connection 4 | for 4 mm tubing O.D.                                                                 |
| Pneumatic connection 1 | for pneumatic tubing outside diameter 8 mm                                           |
| Pneumatic connection 3 | For tubing O.D. 8 mm                                                                 |