

# Solenoid valve MHP2-MS1H-3/20-M5

Part number: 196143

FESTO



General operating condition

## Data sheet

| Feature   | Value  |
|---|--|
| Valve function  | 3/2 open, monostable   |
| Type of actuation                                     | Electric   |
| Construction width                                    | 10 mm  |
| Standard nominal flow rate (standardised to DIN 1343) | 100 l/min  |
| pneumatic working port                                | M5   |
| Operating voltage                                     | 24V DC   |
| Operating pressure                                    | -0.09 MPa ... 0.8 MPa  |
| Operating pressure                                    | -0.9 bar ... 8 bar   |
| Operating pressure                                    | -13.05 psi ... 116 psi   |
| Design  | Pressure-relieved poppet valve                                     |
| Type of reset   | Mechanical spring  |
| Degree of protection                                  | IP65   |
| Approval  | RCM trademark<br>c UL us - Recognized (OL)                         |
| 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<br>To UK RoHS instructions              |
| Nominal size  | 2 mm   |
| Grid dimension  | 14 mm  |
| Note on grid dimension                                | Minimum distance between the valves is 4 mm                        |
| Exhaust-air function                                  | With flow control option   |
| Sealing principle                                     | Soft   |
| Mounting position                                     | optional   |
| Manual override                                       | Non-detenting  |
| Type of piloting                                      | Direct   |
| Flow direction  | Reversible with restrictions                                       |
| Symbol  | 00991322   |
| lap   | Underlap   |
| Reverse polarity protection                           | Bipolar  |
| Additional functions                                  | Spark arresting<br>Holding current reduction<br>Protective circuit |
| Operating pressure, reversible                        | -0.09 MPa ... 0.1 MPa  |
| Operating pressure, reversible                        | -0.9 bar ... 1 bar   |
| Operating pressure, reversible                        | -13.05 psi ... 14.5 psi  |
| Max. switching frequency                              | 330 Hz   |

| Feature  | Value  |
|--|--|
| Switching time off                                   | 2 ms   |
| Switching time on                                    | 1.7 ms   |
| Tolerance switching time off                         | +10%/-30%  |
| Tolerance switching time on                          | +10%/-30%  |
| Switching time dispersion from 1 Hz                  | 0.2 ms   |
| Duty cycle   | 100%   |
| Characteristic coil data                             | 24 V DC: low-current phase 1.25 W, high-current phase 5.0 W                                |
| Permissible voltage fluctuations                     | +/- 10 %   |
| Operating medium                                     | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on operating and pilot medium                   | Lubricated operation possible (in which case lubricated operation will always be required) |
| Vibration resistance                                 | Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6           |
| Restrictions for environmental and media temperature | As a function of switching frequency (see graph)   |
| Shock resistance                                     | Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27                          |
| Corrosion resistance class CRC                       | 2 - Moderate corrosion stress  |
| LABS (PWIS) conformity                               | VDMA24364-B1/B2-L  |
| Cleanroom class                                      | Class 6 according to ISO 14644-1   |
| Media temperature                                    | -5 °C ... 40 °C  |
| Ambient temperature                                  | -5 °C ... 40 °C  |
| Product weight                                       | 60 g   |
| Electrical connection                                | 2-pin<br>Plugs   |
| Type of mounting                                     | On PR rail   |
| Pneumatic connection, port 11                        | Sub-base   |
| Pneumatic connection, port 2                         | M5   |
| Pneumatic port 33                                    | Sub-base   |
| Note on materials                                    | RoHS-compliant   |
| Material seals                                       | HNBR<br>NBR  |
| Material housing                                     | Die-cast zinc, coated  |
| Material screws                                      | Galvanised steel   |