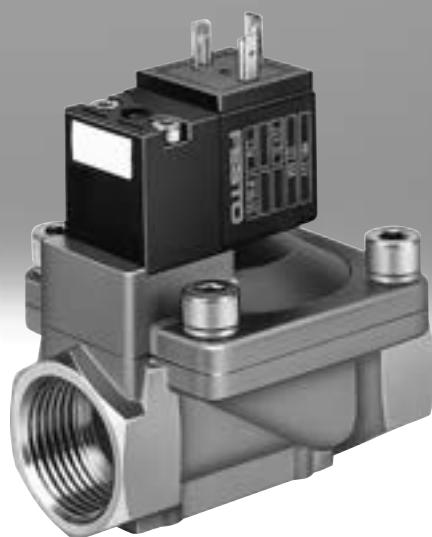


## Solenoid valves MN1H-MS, brass design

**FESTO**



## Characteristics

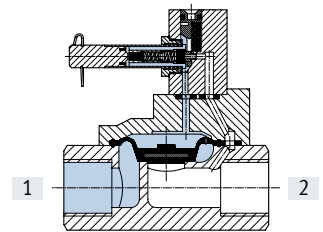


### Function

When the power supply is switched on and the solenoid is energised, the valve is actuated.

The valve MN1H-2-1 1/2-MS has adjustable closing cushioning.

- [1] Supply port
- [2] Supply and output line



### Note

The diaphragm opens briefly when pressure is connected.

## Type codes

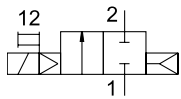
|             |  |
|-------------|--|
| 001         | Series   |
| <b>MN1H</b> | Single solenoid valve, for N1 solenoid coil, brass version |



|          |                |
|----------|----------------|
| 002      | Valve function |
| <b>2</b> | 2/2-way valve  |

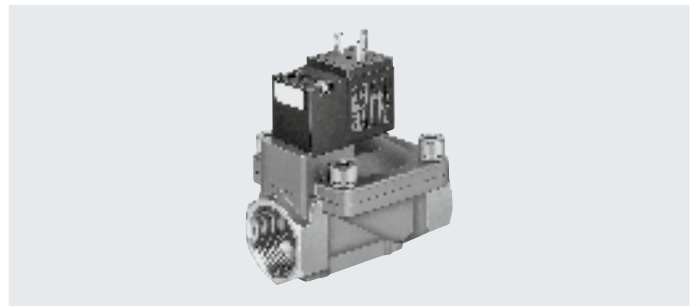
|              |                   |
|--------------|-------------------|
| 003          | Connection, valve |
| <b>1/4</b>   | G1/4              |
| <b>3/8</b>   | G3/8              |
| <b>1/2</b>   | G1/2              |
| <b>3/4</b>   | G3/4              |
| <b>1</b>     | G1                |
| <b>1 1/2</b> | G1 1/2            |

|           |                  |
|-----------|------------------|
| 004       | Housing material |
| <b>MS</b> | Brass            |

Data sheet




-  - Flow rate  
2000 ... 30500 l/min
-  - Voltage  
24 V DC  
110, 230 V AC



| General technical data               |         | G1/4                                   | G3/8 | G1/2 | G3/4  | G1    | G1 1/2 |
|--------------------------------------|---------|--|------|------|-------|-------|--------|
| Process valve connection             |         |  |      |      |       |       |        |
| Valve function                       |         | 2/2-way, single solenoid               |      |      |       |       |        |
| Design                               |         | Diaphragm valve                        |      |      |       |       |        |
| Sealing principle                    |         | Soft                                   |      |      |       |       |        |
| Actuation type                       |         | Electric                               |      |      |       |       |        |
| Reset method                         |         | Pneumatic spring                       |      |      |       |       |        |
| Type of control                      |         | Piloted                                |      |      |       |       |        |
| Flow direction                       |         | Non-reversible                         |      |      |       |       |        |
| Exhaust air function                 |         | Without throttling option              |      |      |       |       |        |
| Manual override                      |         | Non-detenting, detenting via accessory |      |      |       |       |        |
| Type of mounting                     |         | In-line installation                   |      |      |       |       |        |
| Mounting position                    |         | Any                                    |      |      |       |       |        |
| Nominal size                         | [mm]    | 13                                     | 13   | 13   | 20    | 25    | 40     |
| Standard nominal flow rate           | [l/min] | 2000                                   | 2900 | 3100 | 10000 | 11500 | 30500  |
| Product weight                       | [g]     | 450                                    | 450  | 400  | 1100  | 1000  | 2600   |
| Max. tightening torque <sup>1)</sup> | [Nm]    | 35                                     | 60   | 105  | 200   | 380   | 850    |

1) Port 1 and 2

-  - **Note**  
This product conforms to ISO 1179-1 and ISO 228-1

| Operating and environmental conditions |  |
|--|--|
| Medium                                 | Filtered compressed air, grade of filtration 200 µm  |
| Note on the operating/pilot medium     | Lubricated operation possible (in which case lubricated operation will always be required) |
| Medium pressure                        | [bar] 0.5 ... 10   |
| Ambient temperature                    | [°C] -10 ... +60   |
| Temperature of medium                  | [°C] -10 ... +60   |

| Valve switching times    |             |              |
|--------------------------|-------------|--------------|
| Process valve connection | On          | Off          |
| G1/4                     | 30          | 100          |
| G3/8                     | 30          | 100          |
| G1/2                     | 30          | 100          |
| G3/4                     | 120         | 180          |
| G1                       | 120         | 180          |
| G1 1/2                   | 230 ... 440 | 300 ... 1000 |

| Materials       |                            |                 |
|-----------------|----------------------------|-----------------|
| Solenoid valves |                            | Material number |
| Housing         | Brass                      | -               |
| Screws          | High-alloy stainless steel | 1.4301          |

## Data sheet

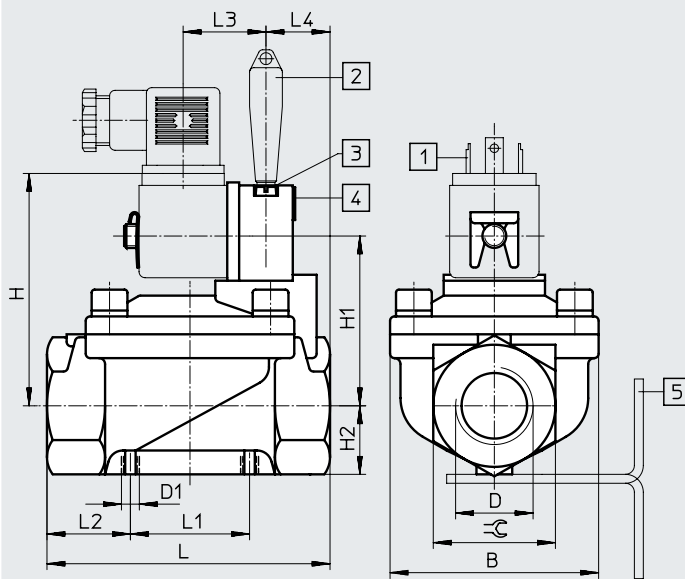
**Electrical data**

N1 solenoid coil

|                                   |  |        |                        |
|-----------------------------------|--|--------|------------------------|
| Electrical connection             | Plug, square design to EN 175301-803, type A |        |                        |
| Operating voltage                 | Direct voltage                               | [V DC] | 24                     |
|                                   | AC voltage                                   | [V AC] | 110/230 (50 ... 60 Hz) |
| Characteristic coil data          | Direct voltage                               | [W]    | 2.5                    |
|                                   | AC voltage                                   | [VA]   | Pull: 5<br>Hold: 3.7   |
| Degree of protection to EN 60 529 | IP65 (with plug socket)                      |        |                        |

**Dimensions**Download CAD data → [www.festo.com](http://www.festo.com)

2/2-way valve



- [1] Wiring at plug socket to EN 175301-803, type A
- [2] Manual override, detenting
- [3] Manual override, resetting
- [4] Space for inscription labels IBS-9x20
- [5] Mounting bracket HRM-...

| Process valve connection D | B  | D1 | H    | H1   | H2   | L   | L1   | L2   | L3   | L4   | ⌀  |
|----------------------------|----|----|------|------|------|-----|------|------|------|------|----|
| G1/4                       | 48 | M4 | 67   | 46   | 15   | 67  | 25   | 21   | 26.5 | 20   | 27 |
| G3/8                       | 48 | M4 | 67   | 46   | 15   | 67  | 25   | 21   | 26.5 | 20   | 27 |
| G1/2                       | 48 | M4 | 67   | 46   | 15   | 67  | 25   | 21   | 26.5 | 20   | 27 |
| G3/4                       | 70 | M6 | 78   | 57   | 23   | 95  | 40   | 27.5 | 26.5 | 21.5 | 41 |
| G1                         | 70 | M6 | 78   | 57   | 23   | 95  | 40   | 27.5 | 26.5 | 21.5 | 41 |
| G1 1/2                     | 96 | M6 | 91.5 | 70.5 | 31.5 | 140 | 59.5 | 38.3 | 26.5 | 30   | 58 |

**Note**

This product conforms to ISO 1179-1 and ISO 228-1

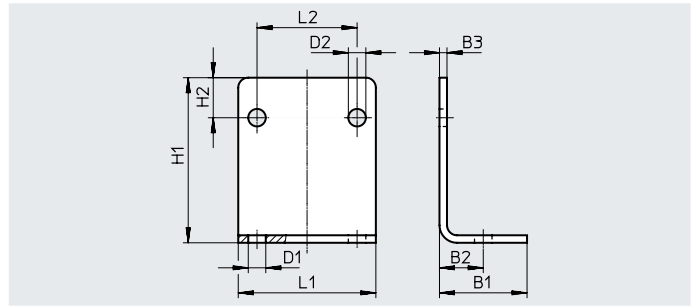
**Ordering data**

| Circuit symbol | Process valve connection | Part no. | Type            |
|----------------|--------------------------|----------|-----------------|
|                | G1/4                     | 161725   | MN1H-2-1/4-MS   |
|                | G3/8                     | 161727   | MN1H-2-3/8-MS   |
|                | G1/2                     | 161728   | MN1H-2-1/2-MS   |
|                | G3/4                     | 161731   | MN1H-2-3/4-MS   |
|                | G1                       | 161732   | MN1H-2-1-MS     |
|                | G1 1/2                   | 161734   | MN1H-2-1 1/2-MS |

## Accessories

### Mounting bracket HRM

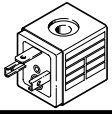
Material:  
Galvanised steel

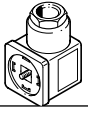



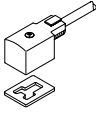
#### Dimensions and ordering data


| For valve with<br>pneumatic connection | B  | B1   | B2 | D<br>∅ | D1<br>∅ | H  | H1 | L  | L1   | Weight<br>[g] | Part no.    | Type         |
|--|----|------|----|--------|---------|----|----|----|------|---------------|-------------|--------------|
| G1/4 ... G1/2                          | 25 | 12.5 | 2  | 6      | 5       | 37 | 10 | 40 | 25   | 39            | <b>9769</b> | <b>HRM-1</b> |
| G3/4 ... G1                            | 35 | 17.5 | 3  | 7      | 7       | 66 | 16 | 55 | 40   | 130           | <b>9770</b> | <b>HRM-2</b> |
| G1 1/2                                 | 47 | 23.5 | 3  | 9      | 7       | 87 | 23 | 75 | 59.5 | 246           | <b>9771</b> | <b>HRM-3</b> |


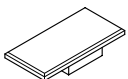
## Accessories

| Ordering data – Solenoid coils  |                        | Data sheets → Internet: msn1 |                |
|---|------------------------|------------------------------|----------------|
|   | Voltage                | Part no.                     | Type           |
|  | 24 V DC                | 123060                       | MSN1G-24DC-OD  |
|   | 110 V AC, 50 ... 60 Hz | 123061                       | MSN1W-110AC-OD |
|   | 230 V AC, 50 ... 60 Hz | 123062                       | MSN1W-230AC-OD |

| Ordering data – Plug sockets, connecting cables                                   |         |                  |                                     |          |                                |
|---|---------|------------------|-------------------------------------|----------|--------------------------------|
|   | Voltage | Cable length [m] | Switching status indication via LED | Part no. | Type                           |
| Plug socket without cable   |         |                  |                                     |          | Data sheets → Internet: mssd-c |
|  | –       | –                | –                                   | 34583    | MSSD-C                         |
| Plug socket without cable with insulation displacement technology                 |         |                  |                                     |          | Data sheets → Internet: mssd-c |
|  | –       | –                | –                                   | 192748   | MSSD-C-S-M16                   |

| Ordering data – Connecting cables  |             |                  |                                     |          |                              |
|--|-------------|------------------|-------------------------------------|----------|------------------------------|
|  | Voltage     | Cable length [m] | Switching status indication via LED | Part no. | Type                         |
| Connecting cables  |             |                  |                                     |          | Data sheets → Internet: kmc1 |
|  | 24 V DC     | 2.5              | ■                                   | 30931    | KMC-1-24DC-2.5-LED           |
|  | 24 V DC     | 5                | ■                                   | 30933    | KMC-1-24DC-5-LED             |
|  | 24 V DC     | 10               | ■                                   | 193459   | KMC-1-24DC-10-LED            |
|  | Up to 230 V | 2.5              | –                                   | 30932    | KMC-1-230AC-2.5              |
|  | Up to 230 V | 5                | –                                   | 30934    | KMC-1-230AC-5                |

| Ordering data – Illuminating seals  |                | Data sheets → Internet: mc-ld |               |
|---|----------------|-------------------------------|---------------|
|   | Voltage        | Part no.                      | Type          |
|  | 12 ... 24 V DC | 19145                         | MC-LD-12-24DC |
|   | 230 V DC/V AC  | 19146                         | MC-LD-230AC   |

| Ordering data – General accessories   |                                      |          |              |
|---|--------------------------------------|----------|--------------|
|   |                                      | Part no. | Type         |
| Manual override   |                                      |          |              |
|  | For N1 coils                         | 157651   | AHB-MD/MF/MV |
| Inscription labels  |                                      |          |              |
|  | Scope of delivery 20 labels in frame | 18182    | IBS-9x20     |