## Series RE-04

Multi-pin connection,
4 – 16 valve stations,
360 Nl/min (0.366 Cv)



## Series RE-44

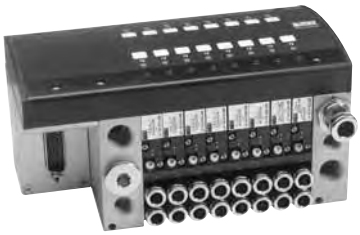
Multi-pin connection,
4 – 16 valve stations,
360 Nl/min (0.366 Cv)



## Series RE-10

Multi-pin, AS-Interface
or fieldbus connection,
4 – 12 valve stations,
300 Nl/min (0.305 Cv)





## Series RE-19

Multi-pin, AS-Interface,
or fieldbus connection,
4 – 24 valve stations,
950 and 2100 Nl/min
(0.965 and 2.134 Cv)



## Series RE-46

Multi-pin, AS-Interface,
or fieldbus connection,
4 – 24 valve stations,
950 Nl/min (0.965 Cv)



# Valve terminal RE-04 with Multi-pin connection
# 4 – 16 valve stations
# 360 Nl/min (0.366 Cv)

## Technical data for series

# RE-04


## Order code

RE-04 / 6 – M

**Series**

**Number of stations**

4 = 4 stations
6 = 6 stations
8 = 8 stations
10 = 10 stations
12 = 12 stations
14 = 14 stations
16 = 16 stations

**Type of connection**

M = Multi-pin

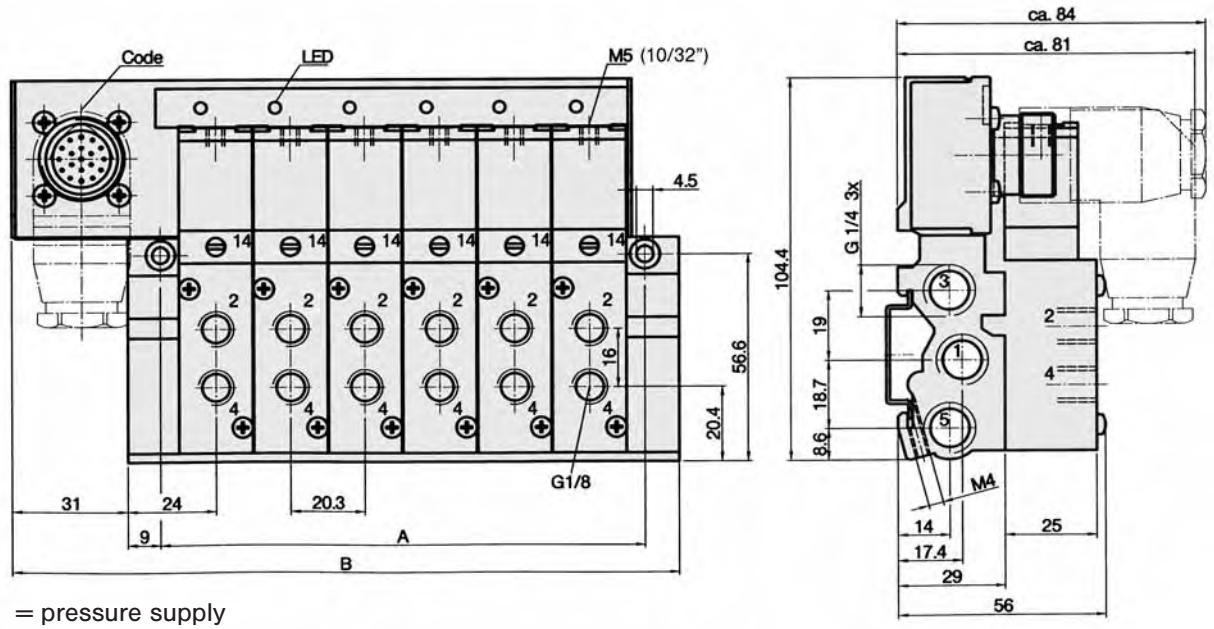
### Design and function

Manifold system with integrated electrical connection including LED, manual override and built-in circuit protection.
Double solenoid valves and 5/3-way valves require 2 stations on the manifold.
The above order code covers only the manifold. The valves and the multi-pin plug with cable must be ordered separately.
The valve terminal is delivered pre-assembled and function-tested. If not specified with the order, valve configuration is as follows:
Valves are mounted according to their order number, starting with high numbers on the side of the multi-pin, ending with low numbers on the opposite side, followed by blind plates (if ordered).

| Technical data | | Multi-pin |
|---|---|---|
| Working pressure range | | 3 … 8 bar (44 … 116 psi) |
| Temperature range | | – 10 °C … + 70 °C (+ 14 °F … + 158 °F) |
| Degree of protection | | IP 65 according to EN 60529 (with suitable connectors) |
| Power consumption | | 2 W per solenoid |
| Output signal | | Polarized circuit protection, built-in surge protection |
| Voltage | | 24 V DC – 10 % … + 15 % |
| Status display: | LED yellow | Valve solenoid energized |
| | LED green | – |
| Connector (others on request) | | 19-pin multi-plug |
| Addressable sockets | | – |
| Power consumption | | – |

## Dimensions for series

# RE-04

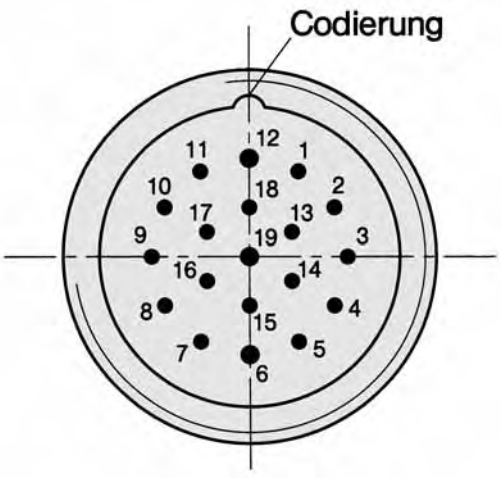



1 = pressure supply
2, 4 = outlets
3, 5 = exhausts

| Order number | A | B | Weight (without valves) |
|---|---|---|---|
| **RE-04/4-M** | 90.9 | 140 | 0.51 kg (1.13 lbs.) |
| **RE-04/6-M** | 131.5 | 180.6 | 0.72 kg (1.59 lbs.) |
| **RE-04/8-M** | 172.1 | 221.2 | 0.93 kg (2.05 lbs.) |
| **RE-04/10-M** | 212.7 | 261.8 | 1.14 kg (2.51 lbs.) |
| **RE-04/12-M** | 253.3 | 302.4 | 1.35 kg (2.98 lbs.) |
| **RE-04/14-M** | 293.9 | 343 | 1.56 kg (3.44 lbs.) |
| **RE-04/16-M** | 334.5 | 383.6 | 1.77 kg (3.90 lbs.) |

### Pin assignment

| Pin | Valve solenoid | 28-ST-RE-…-8 Cable-Code | 28-ST-RE-…-16 Cable-Code |
|---|---|---|---|
| 1 | 1 | black 1 | black 1 |
| 2 | 2 | black 2 | black 2 |
| 3 | 3 | black 3 | black 3 |
| 4 | 4 | black 4 | black 4 |
| 5 | 5 | black 5 | black 5 |
| 6 | GND | black 9 | black 9 |
| 7 | 6 | black 6 | black 6 |
| 8 | 7 | black 7 | black 7 |
| 9 | 8 | black 8 | black 8 |
| 10 | 9 | – | black 17 |
| 11 | 10 | – | black 10 |
| 12 | PE | green / yellow | green / yellow |
| 13 | 11 | – | black 11 |
| 14 | 12 | – | black 12 |
| 15 | 13 | – | black 13 |
| 16 | 14 | – | black 14 |
| 17 | 15 | – | black 15 |
| 18 | 16 | – | black 16 |
| 19 | GND | – | black 18 |




View on valve terminal

# Valve terminal RE-04 with Multi-pin connection
# 4 – 16 valve stations
# 360 Nl/min (0.366 Cv)

## Valves and accessories for series

# RE-04

### Valves

5/2-way, single solenoid
**MF-04-510-HN-412**

5/2-way, double solenoid
**MF-24-520-HN-412**

5/3-way, center position closed
**MF-24-530-HN-412**

5/3-way, center position exhausted
**MF-24-533-HN-412**

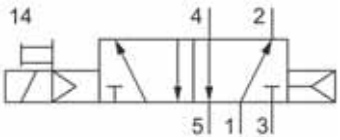
### Other single elements

| | |
|---|---|
| **RE-04-V-EP** | Blind plate |
| **RE-04-DT** | Dividing plate for 2 different pressures |
| **28-ST-RE-100** | 19-pin multi-plug, straight, no cable |
| **28-ST-RE-103-8** | 19-pin multi-plug, straight, with 3 m cable maximum 8 stations |
| **28-ST-RE-103-16** | 19-pin multi-plug, straight, with 3 m cable maximum 16 stations |
| **28-ST-RE-105-8** | 19-pin multi-plug, straight, with 5 m cable maximum 8 stations |
| **28-ST-RE-105-16** | 19-pin multi-plug, straight, with 5 m cable maximum 16 stations |
| **28-ST-RE-107-8** | 19-pin multi-plug, straight, with 7 m cable maximum 8 stations |
| **28-ST-RE-107-16** | 19-pin multi-plug, straight, with 7 m cable maximum 16 stations |
| **28-ST-RE-110** | 19-pin multi-plug, elbow, no cable |
| **28-ST-RE-113-8** | 19-pin multi-plug, elbow, with 3 m cable maximum 8 stations |
| **28-ST-RE-113-16** | 19-pin multi-plug, elbow, with 3 m cable maximum 16 stations |
| **28-ST-RE-115-8** | 19-pin multi-plug, elbow, with 5 m cable maximum 8 stations |
| **28-ST-RE-115-16** | 19-pin multi-plug, elbow, with 5 m cable maximum 16 stations |
| **28-ST-RE-117-8** | 19-pin multi-plug, elbow, with 7 m cable maximum 8 stations |
| **28-ST-RE-117-16** | 19-pin multi-plug, elbow, with 7 m cable maximum 16 stations |
| **54-RE-04-M** | Operating manual RE-04, Multi-pin |

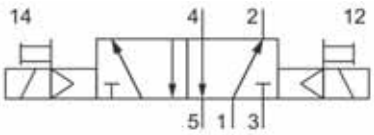
# Valve for
# valve terminal RE-04
# 360 Nl/min (0.366 Cv)

## Technical data for valves

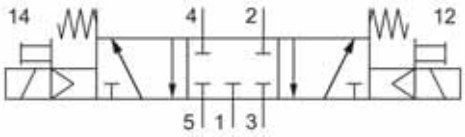
# MF-04, MF-24



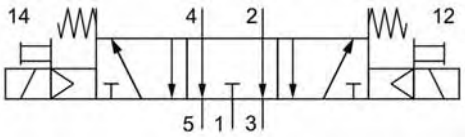

MF-04-510-HN-412




MF-24-520-HN-412




MF-24-530-HN-412




MF-24-533-HN-412

### Design and function

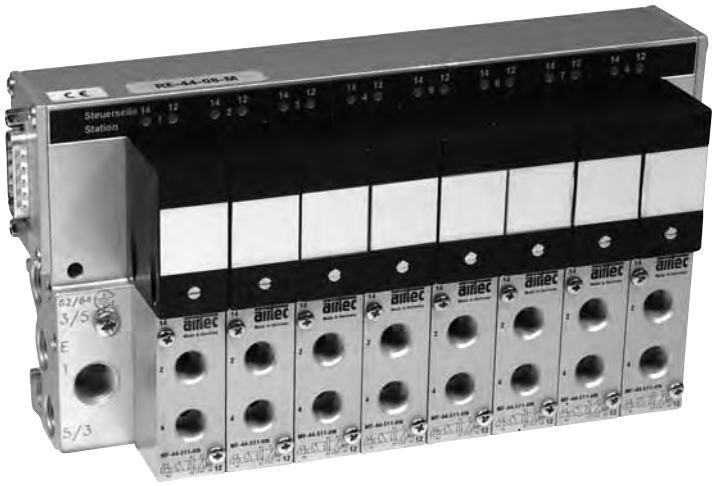
Spool valve actuated by an electrical signal.
Mounting screws and seals are included.

| Order number | MF-04-510-HN-412 | MF-24-520-HN-412 | MF-24-530-HN-412 | MF-24-533-HN-412 |
|---|---|---|---|---|
| Function | 5/2-way single solenoid | 5/2-way double solenoid | 5/3-way center position closed | 5/3-way center position exhausted |
| Connection | G 1/8 at 2 and 4, sub-base mounted at 1, 3, 5 | | | |
| Nominal size | 4 mm | | | |
| Nominal flow | 360 Nl/min (0.366 Cv) | | | |
| Working pressure range | 2.5 … 8 bar (36 … 116 psi) | | 3 … 8 bar (44 … 116 psi) | |
| Response time at 6 bar | on 13 ms off 16 ms | 11 ms | on 15 ms off 22 ms | |
| Temperature range | – 10 °C … + 70 °C (+ 14 °F … + 158 °F) | | | |
| Materials | Body: Al (anodized), plastic, Seals: NBR and POM; Inner parts: Al, stainless steel, brass | | | |
| Operating voltage | 24 V DC | | | |
| Power consumption | 2 W | | | |
| Degree of protection | IP 65 according to EN 60529, when assembled on RE-04 | | | |
| Weight | 0.11 kg (0.25 lb.) | 0.23 kg (0.51 lb.) | 0.232 kg (0.511 lb.) | |

# Valve terminals RE-44 with Multi-pin connection
# 4 – 16 valve stations
# 360 Nl/min (0.366 Cv)

## Technical data for series

# RE-44



## Order code

RE-44 / 06 – M

**Series**

**Number of stations**

4 = 4 stations
6 = 6 stations
8 = 8 stations
10 = 10 stations
12 = 12 stations
14 = 14 stations
16 = 16 stations

**Type of connection**

M = Multi-pin

### Design and function

Manifold system with integrated electrical connection including LED, manual override and built-in circuit protection.

The above order code covers only the manifold. The valves and the multi-pin plug with cable must be ordered separately.

The valve terminal is delivered pre-assembled and function tested. If not specified with the order, valve configuration is as follows:

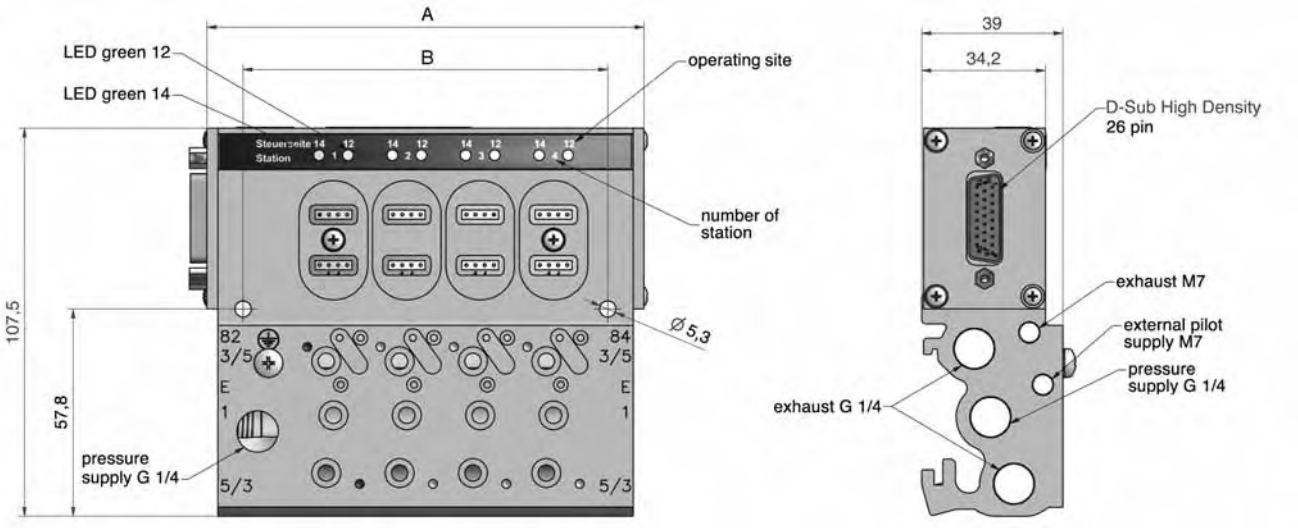
Valves are mounted according to their order number, starting with high numbers (MF-44-533-HN-…) on the side of the multi-pin, ending with low numbers (MF-44-510-HN-…) on the opposite side, followed by blind plates (RE-44-VP, if ordered).

| Technical data | Multi-pin |
|---|---|
| Pressure supply 1 | G 1/4 left, right and top |
| Exhaust 3 + 5 | G 1/4 left and right |
| Exhaust 82/84 | M7 left and right |
| External pilot supply | M7 left and right |
| Outlets 2 + 4 | G 1/8 (Valves) |
| Number of stations | 4, 6, 8, 10, 12, 14 and 16 |
| Materials | Body: Al; mounting parts: steel zinc plated; Seals: NBR;<br>Inner parts: plastic, copper, brass |
| Degree of protection | IP 65 according to EN 60529 with D-sub-plug 22-73-26-6-001 |
| Temperature range | + 5 °C … + 50 °C (+ 41 °F … + 122 °F) |
| Connectors | Multi-pin D-sub HD 26-pins |
| Voltage | 24 V DC +/– 10 % |
| Status display | green |
| Mounting | 2 mounting holes for M4 x 40<br>Mounting rail according DIN EN 60715 TH35 |

## Dimensions for series

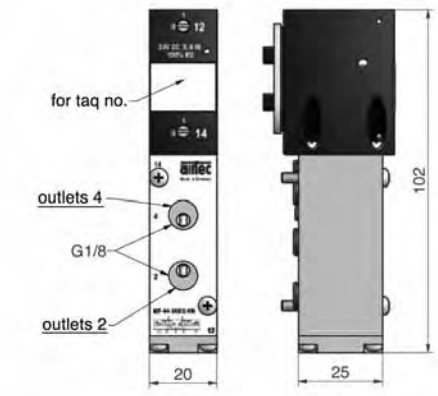
# RE-44

### Multi-pin manifold

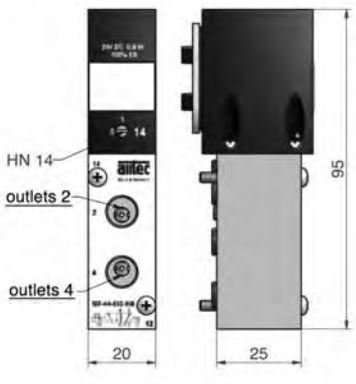



1 = pressure supply
2, 4 = outlets
3, 5 = exhaust
82, 84 = pilot supply

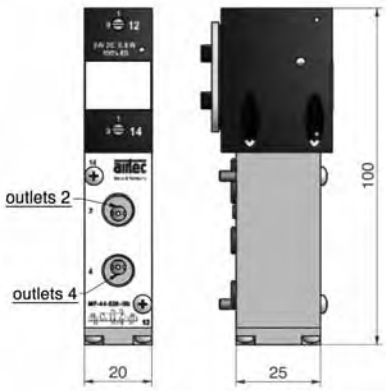
**MF-44-311/2-HN-442**




**MF-44-510-HN-442**
**MF-44-511-HN-442**
**MFE-44-511-HN-442**




**MF-44-520-HN-442**
**MF-44-530-HN-442**
**MF-44-533-HN-442**




Pin assignment see page 6.042.

| Order code | A | B | Weight (without valves) |
|---|---|---|---|
| **RE-44-04-M** | 120.9 | 100.9 | 0.65 kg (1.433 lbs.) |
| **RE-44-06-M** | 161.5 | 141.5 | 0.87 kg (1.918 lbs.) |
| **RE-44-08-M** | 202.1 | 182.1 | 1.1 kg (2.425 lbs.) |
| **RE-44-10-M** | 242.7 | 222.7 | 1.3 kg (2.866 lbs.) |
| **RE-44-12-M** | 283.3 | 263.3 | 1.5 kg (3.307 lbs.) |
| **RE-44-14-M** | 323.9 | 303.9 | 1.7 kg (3.748 lbs.) |
| **RE-44-16-M** | 364.5 | 344.5 | 1.9 kg (4.189 lbs.) |

# Valve terminals RE-44 with Multi-pin connection
# 4 – 16 valve stations
# 360 Nl/min (0.366 Cv)

## Technical data for series

# RE-44

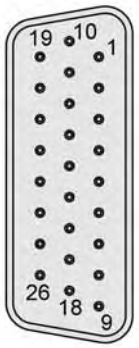
### Pin assignment RE-44 with Sub-D 26-pin Multi-pin

Counted from left to right.

| Pin | 4 – 12 stations | 14 stations | 16 stations | wire coding |
|---|---|---|---|---|
| 1 | Valve 1 pilot port 14 | Valve 1 pilot port 14 | Valve 1 pilot port 14 | white |
| 2 | Valve 1 pilot port 12 | Valve 1 pilot port 12 | Valve 1 pilot port 12 | brown |
| 3 | Valve 2 pilot port 14 | Valve 2 pilot port 14 | Valve 2 pilot port 14 | green |
| 4 | Valve 2 pilot port 12 | Valve 2 pilot port 12 | Valve 2 pilot port 12 | yellow |
| 5 | Valve 3 pilot port 14 | Valve 3 pilot port 14 | Valve 3 pilot port 14 | grey |
| 6 | Valve 3 pilot port 12 | Valve 3 pilot port 12 | Valve 3 pilot port 12 | pink |
| 7 | Valve 4 pilot port 14 | Valve 4 pilot port 14 | Valve 4 pilot port 14 | blue |
| 8 | Valve 4 pilot port 12 | Valve 4 pilot port 12 | Valve 4 pilot port 12 | red |
| 9 | Valve 5 pilot port 14 | Valve 5 pilot port 14 | Valve 5 pilot port 14 | black |
| 10 | Valve 5 pilot port 12 | Valve 5 pilot port 12 | Valve 5 pilot port 12 | violet |
| 11 | Valve 6 pilot port 14 | Valve 6 pilot port 14 | Valve 6 pilot port 14 | grey/pink |
| 12 | Valve 6 pilot port 12 | Valve 6 pilot port 12 | Valve 6 pilot port 12 | red/blue |
| 13 | Valve 7 pilot port 14 | Valve 7 pilot port 14 | Valve 7 pilot port 14 | white/green |
| 14 | Valve 7 pilot port 12 | Valve 7 pilot port 12 | Valve 7 pilot port 12 | brown/green |
| 15 | Valve 8 pilot port 14 | Valve 8 pilot port 14 | Valve 8 pilot port 14 | white/yellow |
| 16 | Valve 8 pilot port 12 | Valve 8 pilot port 12 | Valve 8 pilot port 12 | yellow/brown |
| 17 | Valve 9 pilot port 14 | Valve 9 pilot port 14 | Valve 9 pilot port 14 | white/grey |
| 18 | Valve 9 pilot port 12 | Valve 9 pilot port 12 | Valve 10 pilot port 14 | grey/brown |
| 19 | Valve 10 pilot port 14 | Valve 10 pilot port 14 | Valve 11 pilot port 14 | white/pink |
| 20 | Valve 10 pilot port 12 | Valve 10 pilot port 12 | Valve 12 pilot port 14 | pink/brown |
| 21 | Valve 11 pilot port 14 | Valve 11 pilot port 14 | Valve 13 pilot port 14 | white/blue |
| 22 | Valve 11 pilot port 12 | Valve 12 pilot port 14 | Valve 14 pilot port 14 | brown/blue |
| 23 | Valve 12 pilot port 14 | Valve 13 pilot port 14 | Valve 15 pilot port 14 | white/red |
| 24 | Valve 12 pilot port 12 | Valve 14 pilot port 14 | Valve 16 pilot port 14 | brown/red |
| 25 | Ground | Ground | Ground | white/black |
| 26 | free | free | free | – |

View on valve terminal (plug)

Sub-D 26-pin




Wiring colour acc. to DIN 47100 (coloured or assigned with numbers).

### Explanations for PIN-assignment (26 pins available)

Terminal 4 – 12 stations: All stations can be complete mounted with 2 x 3/2-way and 5/2-way double solenoid or 5/3-way valves.

Terminal 14 stations: Station 1 – 10 can be mounted with 2 x 3/2-way and 5/2-way double solenoid or 5/3-way valves. Station 11 – 14 can be only mounted with single solenoid valves.

Terminal 16 stations: Station 1 – 8 can be mounted with 2 x 3/2-way and 5/2-way double solenoid or 5/3-way valves. Station 9 – 16 can be only mounted with single solenoid valves.

### Multi-pin D-Sub-connector, 26-pins with cable

| Order code | Description | Cable length |
|---|---|---|
| 28-ST-10-M1-26-105 | Multi-pin D-Sub-connector, 26-pins, multi-plug, straight | 5 m |
| 28-ST-10-M1-26-110 | Multi-pin D-Sub-connector, 26-pins, multi-plug, straight | 10 m |
| 28-ST-10-M1-26-1035S | Multi-pin D-Sub-connector, 26-pins, multi-plug, straight, suitable for cable carrier | 3,5 m |
| 28-ST-10-M1-26-105S | Multi-pin D-Sub-connector, 26-pins, multi-plug, straight, suitable for cable carrier | 5 m |
| 28-ST-10-M1-26-110S | Multi-pin D-Sub-connector, 26-pins, multi-plug, straight, suitable for cable carrier | 10 m |

## Valve and accessories for series

# RE-44

### Valves

| | |
|---|---|
| **MF-44-311/2-HN-442** | 2 x 3/2-way solenoid valve NC, spring return |
| **MF-44-510-HN-442** | 5/2-way solenoid valve, monostabil with air spring return |
| **MF-44-511-HN-442** | 5/2-way solenoid valve, monostabil with spring return |
| **MF-44-520-HN-442** | 5/2-way solenoid valve, bistabil |
| **MF-44-530-HN-442** | 5/3-way solenoid valve, center position closed |
| **MF-44-533-HN-442** | 5/3-way solenoid valve, center position exhausted |
| **MFE-44-511-HN-442** | 5/2-way solenoid valve with spring return, ext. pilot supply |

### Single elements

Blind plate with pressure supply port G 1/4
**RE-44-EP**

The blind plate with pressure supply port (G 1/8) is used if 3 different operating pressures are required. Pressure access is always to chanel 1. The supply is only possible from top. The blind plate requires 1 valve station.
The use of the RE-44-EP requires always the use of 2 dividing plates (see below).
Mounting screws and seals are included.

| | |
|---|---|
| Materials | Al, NBR, Steel |
| Weight | 0,090 kg (0.198 lb.) |

Blind plate
**RE-44-VP**

The blind plate is needed to close emused valve stations on the terminal. Seals ore provided for the electrical and pneumatical ports. the IP-protection is guaranteed.
Mounting screws and seals are included.

| | |
|---|---|
| Materials | Al, NBR, Steel |
| Weight | 0,100 kg (0.220 lb.) |

Dividing plate
**RE-44-DT**

The dividing plate RE-44-DT can only be used in chanel 1. The number of dividing plates is not limited and provides the option on additional different operating pressures. The mounting is always from the inside to the outside. By working with more than 2 different operating pressures, a blind plate RE-44-EP must be used.

| | |
|---|---|
| Required mounting tools | Allen key 4 mm and mounting pin Ø 4 |
| Materials | Brass, Steel, NBR |
| Weight | 0,010 kg (0.022 lb.) |

Dividing plate
**RE-04-DT**

The dividing plate RE-04-DT is used for the separation of 2 different operating pressures. It can be mounted in chanel 1, 3 and 5. In each chanel only 1 dividing plate can be mounted.

| | |
|---|---|
| Required mounting tools | Allen key 4 mm and screwdriver |
| Materials | Brass, Steel, NBR |
| Weight | 0,010 kg (0.022 lb.) |

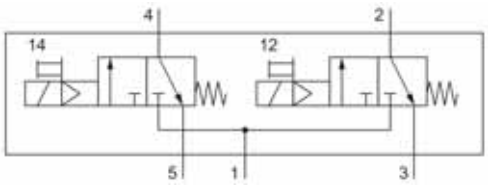
**Suitable fittings**

| | |
|---|---|
| Straight push-in fitting | **series 40-001 and 40-K01** |
| Plugs | **40-279-1-14, 40-279-1-18, 40-279-1-M7, 40-277-14** |
| Silencer | **40-90-014, 40-501-14, 40-502-M7** |

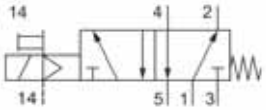
# Valve for
# valve terminal RE-44
# 360 Nl/min (0.366 Cv)

## Technical data for valves

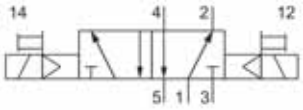
# MF-44



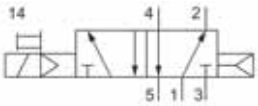

MF-44-311/2-HN-442



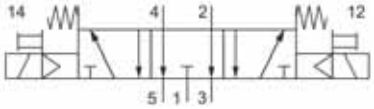

MFE-44-511-HN-442




MF-44-520-HN-442

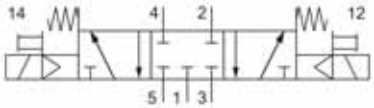



MF-44-510-HN-442




MF-44-533-HN-442


MF-44-511-HN-442




MF-44-530-HN-442


### Design and function

Spool valve actuated by an electrical signal.
Mounting screws and seals are included.

| Order code[1)] | MF-44-311/2-... | MF-44-510-... | MF-44-511-... | MF-44-520-... | MF-44-530-... | MF-44-533-... | MFE-44-511-... |
|---|---|---|---|---|---|---|---|
| **Function** | 2 x 3/2-way NC, spring return | 5/2-way single solenoid air spring return | 5/2-way single solenoid spring return | 5/2-way double solenoid | 5/3-way center position closed | 5/3-way center position exhausted | 5/2-way spring return ext. pilot supply |
| **Connection** | G 1/8 at 2 and 4; flange at 1, 3, 5 | | | | | | |
| **Nominal size** | 4 mm | | | | | | |
| **Flow rate** | 330 Nl/min (0.335 Cv) | 360 Nl/min (0.366 Cv) | | | | | |
| **Working pressure range** | 3 … 8 bar (44 … 116 psi) | 2,5 … 8 bar (36 … 116 psi) | 3 … 8 bar (44 … 116 psi) | 2,5 … 8 bar (36 … 116 psi) | 3 … 8 bar (44 … 116 psi) | | 0 … 8 bar (0 … 116 psi) |
| **Pilot pressure range** | | | | | | | 3 … 8 bar (44 … 116 psi) |
| **Response time at 6 bar** | on 16 ms off 30 ms | on 12 ms off 38 ms | | on 12 ms | | on 12 ms off 38 ms | |
| **Temperature range** | 5 °C … 50 °C (41 °F ... + 122 °F) | | | | | | |
| **Materials** | Body: Al (anodized), plastic; Seals: NBR and POM; Inner parts: Al, stainless steel and brass | | | | | | |
| **Voltage** | 24 V DC ± 10 % | | | | | | |
| **Power consumption** | 2 x 0,8 W | 0,8 W | | 2 x 0,8 W | | | 0,8 W |
| **Degree of protection** | IP 65 according to EN 60529 mounted of manifold RE-44 | | | | | | |
| **Weight** | 0,160 kg (0.353 lb.) | 0,150 kg (0.331 lb.) | | 0,160 kg (0.353 lb.) | | | 0,150 kg (0.331 lb.) |

[1)] Please specify complete according for the order codes shown below the pneumatic symbol.

# Note

# Valve terminal RE-10 with Multi-pin, AS-Interface or bus connection 4 – 12 valve stations, 300 Nl/min (0.305 Cv)

## Technical data for series

# RE-10

## Order code

RE-10/08-M-1-060

**Series**

**Number of stations**

Multi-pin: 4, 6, 8, 10, 12

Bus versions: 4, 8, 12

**Electrical options**

M-1 = Multi-pin D-Sub plug
AS3 = AS-Interface range of address 0-31
AS4 = AS-Interface range of address 0-62
AS5 = AS-Interface (for LF-10-510-HN-412 and LF-10-511-HN-412) range of address 0-31
B1 = Profibus-DP
B1-L = Profibus-DP with link interface
B6 = CANopen
B6-L = CANopen with link interface
L = Link-Slave

**Pilot supply options**

0 = internal pilot supply
E = external pilot supply

**Tube connection options**

40 = ø 4 mm on ports 2 and 4, G 1/4 on port 1
41 = ø 4 mm on ports 2 and 4, ø 8 mm on port 1
42 = ø 4 mm on ports 2 and 4, ø 10 mm on port 1
60 = ø 6 mm on ports 2 and 4, G 1/4 on port 1
61 = ø 6 mm on ports 2 and 4, ø 8 mm on port 1
62 = ø 6 mm on ports 2 and 4, ø 10 mm on port 1

## Design and function

Manifold system with integrated electrical connection including LED indicators. Each station can accomodate two 3/2-way valves or one 5/2- or 5/3-way valve. All connections are accessible from the front.

The valves and the multi-pin plug with cable must be ordered separately.

The manifold can be mounted with 4 M5 screws from bottom or from top using the mounting bracket RE-10-B-01 or on a DIN-rail (screws are included).

The valve terminal is delivered pre-assembled and function-tested. If not specified with the order, valve configuration is as follows:

Valves are mounted according to their order number, starting with high numbers on the side of the multi-pin, ending with low numbers on the opposite side, followed by blind plates (if ordered).

| Technical data | AS-Interface | Profibus-DP | Profibus-DP with Link | CANopen | CANopen with Link | Link-Slave | Multi-pin |
|---|---|---|---|---|---|---|---|
| Number of stations | 4, 8, 12 | 4, 8, 12 | 4, 8, 12 | 4, 8, 12 | 4, 8, 12 | 4, 8, 12 | 4,6,8,10,12 |
| Power range | see valve | | | | | | |
| Temperature range | + 5 °C … 50 °C (41 °F … + 122 °F) | | | | | | |
| Voltage | 24 V DC | | | | | | |
| Voltage tolerance | – 5 % … + 10 % | | | | | | |
| Voltage bus | 18,5 … 31,6 V DC | – | – | – | – | – | – |

# Valve terminal RE-10 with Multi-pin, AS-Interface or bus connection 4 – 12 valve stations, 300 Nl/min (0.305 Cv)

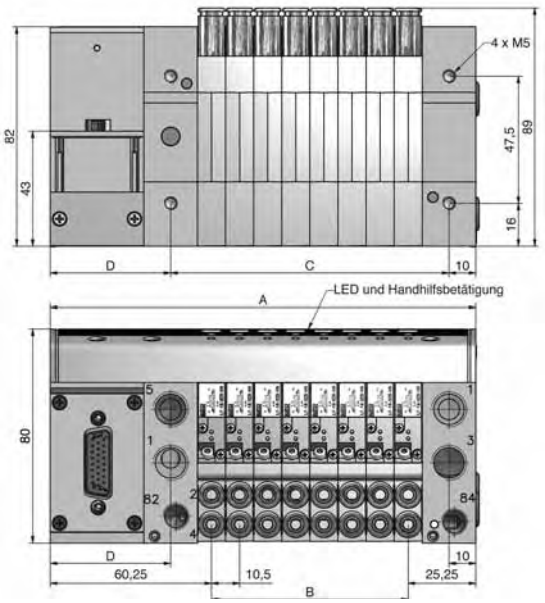
| Technical data | | AS-Interface | Profibus-DP | Profibus-DP with Link | CANopen | CANopen with Link | Link-Slave | Multi-pin |
|---|---|---|---|---|---|---|---|---|
| **Power consumption** | | | | | | | | |
| **each solenoid**[1] | | 1,1 W | 1,1 W | 1,1 W | 1,1 W | 1,1 W | 1,1 W | 1,1 W |
| **each bus system** | | – | 4,3 W | 4,3 W | 4,3 W | 4,3 W | 1,5 W | – |
| **each slave** | | 1,1 W | – | – | – | – | – | – |
| **Status indicator (LED):** | | | | | | | | |
| **Solenoid** | **active** | yellow | yellow | yellow | yellow | yellow | yellow | yellow |
| | **error** | red | red | red | red | red | red | – |
| **Power valve** | **active** | green (3 internal circuits) | green (3 internal circuits) | green (3 internal circuits) | green (3 internal circuits) | green (3 internal circuits) | green (3 internal circuits) | – |
| | **error** | off | off | off | off | off | off | – |
| **Power fieldbus** | | – | green | green | green | green | green | – |
| **Status fieldbus** | **active** | green (1 x each Slave) | green | green | green | green | green | – |
| | **error** | red (1 x each Slave) | red | red | red | red | red | – |
| **Fieldbus online** | | – | green | green | – | – | – | – |
| **Fieldbus error** | | – | – | – | red | red | – | – |
| **Status system** | **active** | – | – | green | – | green | green | – |
| | **error** | – | – | red | – | red | red | – |
| **EMC circuit** | | Power with Polarized circuit protection and built-in surge protection | | | | | | |
| **Electrical connection** | | | | | | | | |
| **Power in** | | AS-Interface clamp | M12 socket 5-pin, A-code | M12 socket 5-pin, A-code | M12 socket 4-pin, A-code | M12 socket 4-pin, A-code | M12 socket 5-pin, A-code | D-Sub 26-pin (high density), common GND |
| **Power out** | | – | – | – | – | – | M12-Buchse 5-pin, A-code | |
| **Bus in** | | AS-Interface clamp | M12 socket 5-pin, B-code | M12 socket 5-pin, B-code | M12 socket 5-pin, A-code | M12 socket 5-pin, A-code | – | – |
| **Bus out** | | – | M12-plug 5-pin, B-code | M12-plug 5-pin, B-code | M12-plug 5-pin, A-code | M12-plug 5-pin, A-code | – | – |
| **Link in** | | – | – | – | – | – | M8 socket 4-pin | |
| **Link out** | | – | – | M8-plug 4-pin | – | M8-plug 4-pin | M8-plug 4-pin | – |
| **Address selection** | | Low voltage switch plug Ø 1.3 mm and Slave selection by DIP-switch | Bus by 2 rotary switches (Adr. 1 … 99) | Bus by 2 rotary switches (Adr. 1 … 99) Link over 2 rotary switches (no. of Slaves 1 … 10) | Bus by 2 rotary switches (Adr. 1 … 99) | Bus by 2 rotary switches (Adr. 1 … 99) Link over 2 rotary switches (no. of Slaves 1 … 10) | Link over 2 rotary switches (no. of bus addresses 1 … 10) | – |
| **Baud-rate** | **Bus** | – | 9,6 kbit/s … 12 Mbit/s | 9,6 kbit/s … 12 Mbit/s | 10 kbit/s … 1 Mbit/s | 10 kbit/s 1 Mbit/s | | – |
| | **Link** | | – | 250 kbit/s | – | 250 kbit/s | 250 kbit/s | |
| max. cable length depends on Baud-rate | **Bus** | – | 50…1200 m | 50…1600 m | 50…1600 m | 50…1600 m | – | – |
| | **Link** | – | – | max. 100 m | – | max. 100 m | max. 100 m | |
| **Service-Interface** | | | RS232 | RS232 | RS232 | RS232 | RS232 | – |
| **Bus terminator** | | | over external Profibus-Terminator[2] | | over external CANopen-Terminator[2] | | internal Terminator over DIP switch | |
| **Protection** | | IP 65 acc. EN 60529 in connection with the AIRTEC cable 28-ST-10-M1-26-… | | | | | | |

[1] The status display consumes 0.25 W of the 1.3 W power consumption.
[2] Bus termination resistance is available for Profibus-DP and DeviceNet as an accessory (see page 6.056).

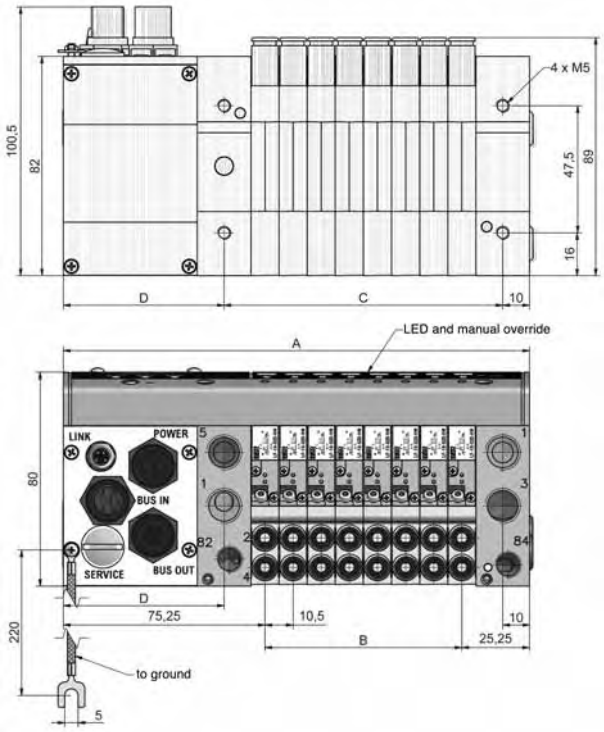
## Dimensions for series

# RE-10

### Multi-pin




### Bus-Terminal




1 = pressure supply, G 1/4
2, 4 = outlets, fitting for tube ⌀ 6 mm
3, 5 = exhausts, G 1/4
82, 84 = solenoid exhaust, G 1/8

**Manual override –** spring return: press down
detent: press and turn

| Order number | A | B | C ± 0,3 | D |
|---|---|---|---|---|
| **RE-10/04-M-1-040 or -060** | 117 | 31,5 | 62 | 45 |
| **RE-10/06-M-1-040 or -060** | 138 | 52,5 | 83 | 45 |
| **RE-10/08-M-1-040 or -060** | 159 | 73,5 | 104 | 45 |
| **RE-10/10-M-1-040 or -060** | 180 | 94,5 | 125 | 45 |
| **RE-10/12-M-1-040 or -060** | 201 | 115,5 | 146 | 45 |
| **RE-10/04-B1-040 or -060**<br>**RE-10/04-B1-L-040 or -060**<br>**RE-10/04-B6-040 or -060**<br>**RE-10/04-B6-L-040 or -060**<br>**RE-10/04-L-040 or -060**<br>**RE-10/04-ASx-040 or -060**[1] | 132 | 31,5 | 62 | 60 |
| **RE-10/08-B1-040 or -060**<br>**RE-10/08-B1-L-040 or -060**<br>**RE-10/08-B6-040 or -060**<br>**RE-10/08-B6-L-040 or -060**<br>**RE-10/08-L-040 or -060**<br>**RE-10/08-ASx-040 or -060**[1] | 174 | 73,5 | 104 | 60 |
| **RE-10/12-B1-040 or -060**<br>**RE-10/12-B1-L-040 or -060**<br>**RE-10/12-B6-040 or -060**<br>**RE-10/12-B6-L-040 or -060**<br>**RE-10/12-L-040 or -060**<br>**RE-10/12-ASx-040 or -060**[1] | 216 | 115,5 | 146 | 60 |

[1] ASx stays for the versions AS3, AS4 and AS5 according to the order code, see page 6.050.

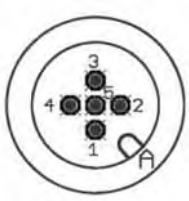
## Pin assignment fieldbus-connection for series

# RE-10

## Profibus DP

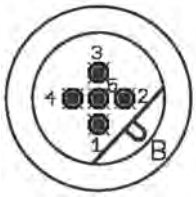
**POWER IN** Plug M12 5-pin A-code (POWER 24V)[1)]

| Pin | Name | Description |
|---|---|---|
| 1 | +24V | Power supply-terminal |
| 2 | n. c. | not connected |
| 3 | GND | Ground for 24 V DC |
| 4 | n. c. | not connected |
| 5 | n. c. | not connected |



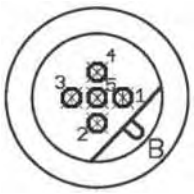

**BUS IN** Plug M12 5-pin B-code

| Pin | Name | Description |
|---|---|---|
| 1 | n. c. | not connected |
| 2 | A | RS485A (Tx/Rx-N) |
| 3 | n. c. | not connected |
| 4 | B | RS485B (Tx/Rx-P) |
| 5 | Shield[2)] | Shield |



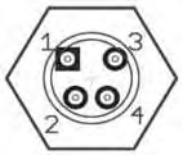

**BUS OUT** Socket M12 5-pin B-code[3)]

| Pin | Name | Description |
|---|---|---|
| 1 | +5V | Power supply termina |
| 2 | A | RS485A (Tx/Rx-N) |
| 3 | GND | Ground for +5V |
| 4 | B | RS485B (Tx/Rx-P) |
| 5 | Shield | Shield |




**LINK OUT** Socket M8 4-pin (only for Link Master)

| Pin | Name | Description |
|---|---|---|
| 1 | LINK H | Data cable high |
| 2 | LINK GND | Data cable GND |
| 3 | LINK L | Data cable low |
| 4 | LINK SHLD | Data cable shield |




[1)] The pin assignment is according DESINA-Norm Rev. 2.0 for M12 actuators. The pins 2, 4 and 5 are not connected.
[2)] The shield can be connected to the metal collar of the plug (improves the shield and is recommended) or at pin 5.
[3)] An unused socket connection must be terminated with the termination resistance.

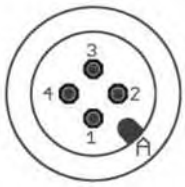
## Pin assignment fieldbus-connection for series

# RE-10

## CANopen

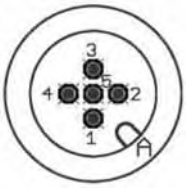
**POWER IN** Plug M12 4-pin A-code (POWER 24V)[1)]

| Pin | Name | Description |
|---|---|---|
| 1 | +24V | Power supply-terminal |
| 2 | n. c. | not connected |
| 3 | GND | Ground for 24 V DC |
| 4 | n. c. | not connected |



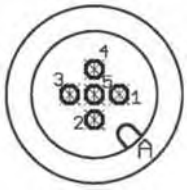

**BUS IN** Plug M12 5-pin A-code

| Pin | Name | Description |
|---|---|---|
| 1 | SHLD | Shield[2)] |
| 2 | CAN V+ | CAN Supply |
| 3 | GND | CAN Ground |
| 4 | CAN H | CAN high |
| 5 | CAN L | CAN low |



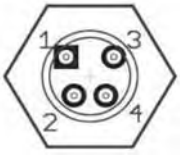

**BUS OUT** Socket M12 5-pin A-code[3)]

| Pin | Name | Description |
|---|---|---|
| 1 | SHLD | Shield[2)] |
| 2 | CAN V+ | CAN Supply |
| 3 | GND | CAN Ground |
| 4 | CAN H | CAN high |
| 5 | CAN L | CAN low |




**LINK OUT** Socket M8 4-pin (only for Link Master)

| Pin | Name | Description |
|---|---|---|
| 1 | LINK H | Data cable high |
| 2 | LINK GND | Data cable GND |
| 3 | LINK L | Data cable low |
| 4 | LINK SHLD | Data cable shield |




[1)] The pin assignment is according DESINA-Norm Rev. 2.0 for M12 actuators. The pins 2, 4 and 5 are not connected.
[2)] The shield can be connected to the metal collar of the plug (improves the shield and is recommended) or at pin 5.
[3)] An unused socket connection must be terminated with the termination resistance.

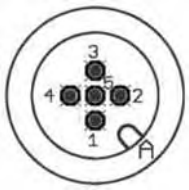
## Pin assignment fieldbus-connection for series

# RE-10

## Link Slave

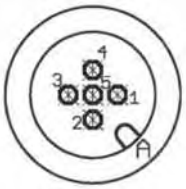
**POWER IN** Plug M12 5-pin A-code (POWER 24V)[1)]

| Pin | Name | Description |
|---|---|---|
| 1 | +24V | Power supply-terminal |
| 2 | n. c. | not connected |
| 3 | GND | Ground for 24 V |
| 4 | n. c. | not connected |
| 5 | n. c. | not connected |



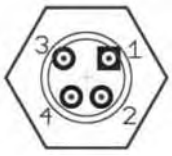

**POWER OUT** Socket M12 5-pin A-code (POWER 24V)[1)]

| Pin | Name | Description |
|---|---|---|
| 1 | +24V | Power supply-terminal |
| 2 | n. c. | not connected |
| 3 | GND | Ground for 24 V |
| 4 | n. c. | not connected |
| 5 | n. c. | not connected |



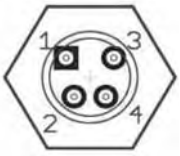

**LINK IN** Plug M8 4-pin

| Pin | Name | Description |
|---|---|---|
| 1 | LINK H | Data cable high |
| 2 | LINK GND | Data cable GND |
| 3 | LINK L | Data cable low |
| 4 | LINK SHLD | Data cable shield |




**LINK OUT** Socket M8 4-pin

| Pin | Name | Description |
|---|---|---|
| 1 | LINK H | Data cable high |
| 2 | LINK GND | Data cable GND |
| 3 | LINK L | Data cable low |
| 4 | LINK SHLD | Data cable shield |




[1)] The pin assignment is according DESINA-Norm Rev. 2.0 for M12 actuators. The pins 2, 4 and 5 are not connected.

# Valve terminal RE-10 with Multi-pin, AS-Interface or bus connection 4 – 12 valve stations, 300 Nl/min (0.305 Cv)

## Technical data for series

# RE-10

## Pin assignment

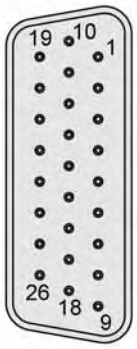
**Connector cable 28-ST-10-M1-26-**...
For valve terminals with 4 ... 12 stations.

| Pin | Solenoid | Wire colour | Pin | Solenoid | Wire colour |
|---|---|---|---|---|---|
| **1** | 1 | white | **14** | 14 | brown/green |
| **2** | 2 | brown | **15** | 15 | white/yellow |
| **3** | 3 | green | **16** | 16 | yellow/brown |
| **4** | 4 | yellow | **17** | 17 | white/grey |
| **5** | 5 | grey | **18** | 18 | grey/brown |
| **6** | 6 | pink | **19** | 19 | white/pink |
| **7** | 7 | blue | **20** | 20 | pink/brown |
| **8** | 8 | red | **21** | 21 | white/blue |
| **9** | 9 | black | **22** | 22 | brown/blue |
| **10** | 10 | violet | **23** | 23 | white/red |
| **11** | 11 | grey/pink | **24** | 24 | brown/red |
| **12** | 12 | red/blue | **25** | 0V | white/black |
| **13** | 13 | white/green | **26** | 0V | (brown/black) |

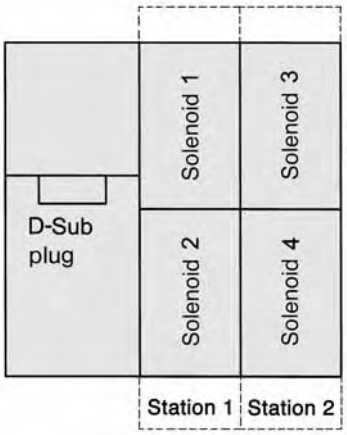
Wiring colour acc. to DIN 47100 (coloured or assigned with numbers).

View on valve terminal (Plug)

D-Sub 26-pin



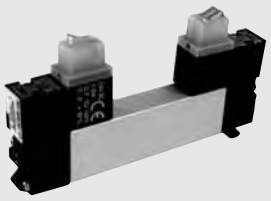

Solenoid layout




## Valve and accessories for series RE-10

### Valves

| | |
|---|---|
| **LF-10-310/2-HN-412** | 2 x 3/2-way closed |
| **LF-10-312/2-HN-412** | 2 x 3/2-way open |
| **LF-10-314/2-HN-412** | 2 x 3/2-way open/closed |
| **LF-10-510-HN-412** | 5/2-way with air spring |
| **LF-10-511-HN-412** | 5/2-way with mech. spring |
| **LF-10-520-HN-412** | 5/2-way double solenoid |
| **LF-10-530-HN-412** | 5/3-way center position closed |
| **LF-10-533-HN-412** | 5/3-way center position exhausted |
| **LF-10-534-HN-412** | 5/3-way center position pressurized |



### Single elements

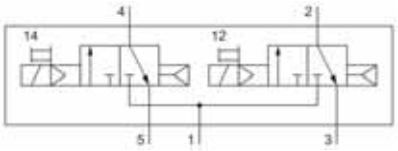
| | |
|---|---|
| **RE-10-DT-01** | Dividing plate for P-chanel |
| **RE-10-DT-02** | Dividing plate for R + S-chanel |
| **RE-10-ES** | Element for external pilot supply |
| **RE-10-P-01** | Element for additional air supply |
| **RE-10-V-EP** | Blind plate for valve and solenoid position |
| **RE-10-B-01** | Bracket for flange mounting |
| **RE-10-MS-01** | Kit for DIN rail mounting |
| **28-ST-10-M1-26-105** | Multi-pin connector, D-Sub 26-pin, 5 m cable |
| **28-ST-10-M1-26-110** | Multi-pin connector, D-Sub 26-pin, 10 m cable |

**Cable for fieldbus on request.**

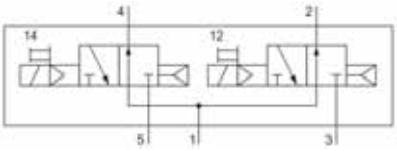
# Valve for
# Valve terminal RE-10
# 300 Nl/min (0.305 Cv)

## Technical data for valve

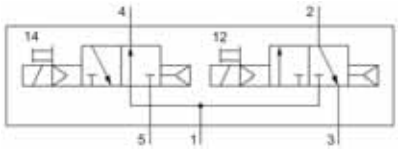
# LF-10



LF-10-310/2-HN-412

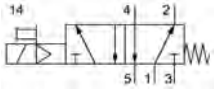


LF-10-312/2-HN-412

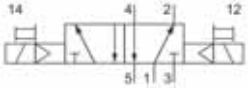


LF-10-314/2-HN-412

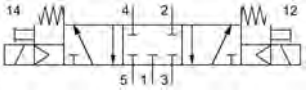
LF-10-510-HN-412



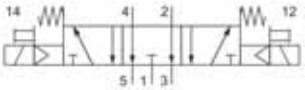
LF-10-511-HN-412



LF-10-520-HN-412



LF-10-530-HN-412



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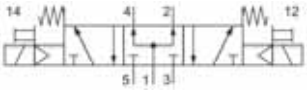
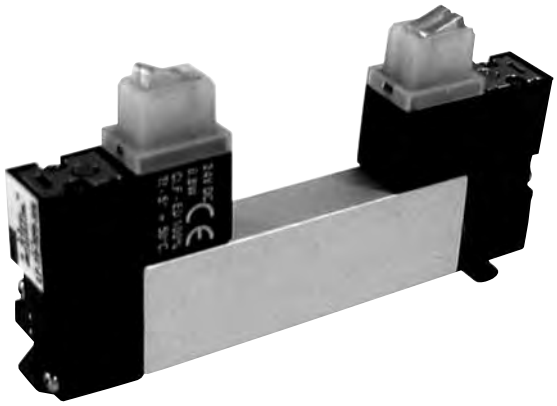


LF-10-534-HN-412



### Design and function

Spool valve actuated by an electrical signal.

| Order number[1] | LF-10-310/2-... | LF-10-312/2-... | LF-10-314/2-... | LF-10-510-... | LF-10-511-... | LF-10-520-... | LF-10-530-... | LF-10-533-... | LF-10-534-... |
|---|---|---|---|---|---|---|---|---|---|
| **Function** | 2 x 3/2-way closed | 2 x 3/2-way open | 2 x 3/2-way open/closed | 5/2-way air spring | 5/2-way mechanical spring return | 5/2-way double solenoid | 5/3-way center pos. closed | 5/3-way center pos. exhausted | 5/3-way center pos. pressurized |
| **Connection** | Flange | | | | | | | | |
| **Nominal size** | 4 mm | | | | | | | | |
| **Nominal flow Qv[2]** | 300 (0.305 Cv) | 220 (0.224 Cv) | 220 / 300 (0.224/0.305 Cv) | 300 (0.305 Cv) | 300 (0.305 Cv) | 300 (0.305 Cv) | 280 (0.285 Cv) | | 300 (0.305 Cv) |
| **Pressure range[3]** | 1,5 … 8 bar (21.75 … 116 psi) | | | 1,5…8 bar (21.75…116 psi) | 3… 8 bar (43.5…116 psi) | 1,5…8 bar (21.75…116 psi) | 3,5 … 8 bar (50.75…116 psi) | | |
| **Pressure range[4]** | 1,5 … 8 bar (21.75 … 116 psi) | | | | | | | | |
| **External pilot pressure** | 1,5 … 8 bar (21.75 … 116 psi) | | | 1,5…8 bar (21.75…116 psi) | 3… 8 bar (43.5…116 psi) | 1,5…8 bar (21.75…116 psi) | 3,5 … 8 bar (50.75…116 psi) | | |
| **Response on time[5] off** | 14 ms 22 ms | | | 18 ms 28 ms | 14 ms 30 ms | 15 ms | 20 ms 30 ms | 16 ms 30 ms | |
| **Temperature range** | – 5 °C … + 50 °C (+ 23 °F … + 122 °F) | | | | | | | | |
| **Materials** | Body: Al (anodized), plastic, Seals: NBR, plastic, Inner parts: Al, POM, stainless steel and brass | | | | | | | | |
| **Operating voltage** | 24 V DC – 5 % / + 10 % (22,8 V … 26,4 V) | | | | | | | | |
| **Power consumption** | 0,8 W je Pilotventil | | | | | | | | |
| **Degree of protection** | IP 65 according to EN 60529, when assembled on RE-10 | | | | | | | | |
| **Weight** | 0,050 kg (0.10 lb.) | | | 0,044 kg (0.09 lb.) | 0,042 kg (0.092 lb.) | 0,052 kg (0.11 lb.) | 0,050 kg (0.115 lb. | | |

[1] Please complete according to order code (see circuit symbols).
[2] Flow Qy from 1 to 2 (1 to 4) in Nl/min.
[3] For internal pilot pressure.
[4] For external pilot pressure.
[5] Response time at 6 bar acc. CETOP 111 P.

# Valve terminal RE-19 with Multi-pin, AS-Interface, Profi- or Interbus 4 – 24 valve stations, 950 – 2100 Nl/min (0.965 – 2.134 Cv)

## Technical data for series

# RE-19

## Order code

RE-19 / 8 – M

**Series**

**Number of stations**

**Electrical options**

M-1 = Multi-pin
B1-1 = Profibus-DP
B2-1 = Interbus-S
AS2 = AS-Interface
AS3 = AS-Interface with addressable socket

### Design and function

Manifold system with integrated electrical connection including LED indicators, manual override and built-in circuit protection.

Valves with connection G 1/4 (2100 Nl/min / 2.134 Cv) require 2 stations on the manifold.

The above order code covers only the manifold. The multi-pin plug with cable must be ordered separately.

The valve terminal is delivered pre-assembled and function-tested. If not specified with the order, valve configuration is as follows:

Valves are mounted according to their order number, starting with high numbers at the side of the multi-pin, ending with low numbers on the opposite side, followed by blind plates (if ordered).

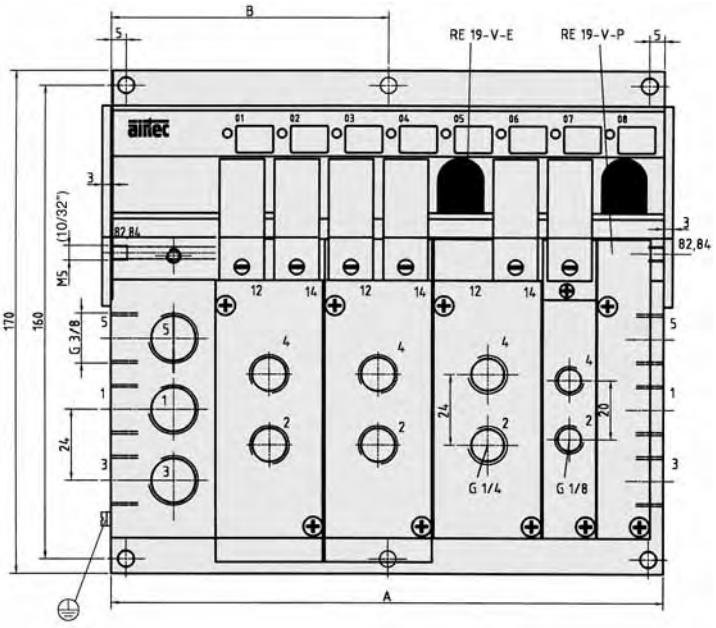
| Technical data | | Multi-pin | AS-Interface | Profibus-DP | Interbus-S |
|---|---|---|---|---|---|
| Number of stations | | 4, 6, 8, 10 … 22 | 4, 8 and 12 | 6, 8, 10 … 24 | 6, 8, 10 … 24 |
| Working pressure range | | 3 … 8 bar (44 … 116 psi) | | | |
| Temperature range | | – 10 °C … + 50 °C (+ 14 °F … + 122 °F) | 0 °C … + 50 °C (+ 32 °F … + 122 °F) | | |
| Degree of protection | | IP 65 according to VDE 0470 / EN 60529 (with suitable connectors) | | | |
| Voltage | | 24 V DC -10 %…+15 % | 29.5 … 31.5 V DC | 24 V DC ± 10 % | |
| Power consumption each solenoid | | 2.5 W | | | |
| Output signal | | Polarized circuit protection, built-in surge protection | | | |
| Status display | LED yellow | Valve solenoid energized | | | |
| | LED green | – | Power Voltage | Power Voltage | Power Voltage |
| | LED green | – | Bus active | PWR Bus active | BA Bus active |
| | LED green | – | – | – | RC Remote bustest |
| | LED red | – | – | ERR Bus error | ERR Bus error |
| Connector | | 25-pin D-Sub | Bus AS-Interface connector | Bus 9-pin D-SUB (bushing) | Bus 9-pin D-SUB (bushing - out, socket - in) |
| | | | Power AS-Interface connector | Power plug 4-pin M 12 | Power plug 4-pin M 12 |

| Technical data | Profibus-DP |
|---|---|
| Address selection | Selection by 2 decimal coded rotary switches |
| Bus termination resistance | Switchable ON - OFF |
| Baud rate | Selectable between 9600 bit/s and 12 Mbit/s |

## Dimensions for series

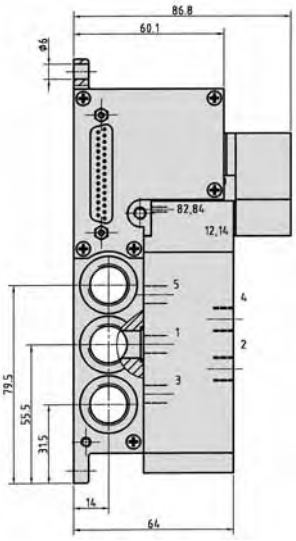
# RE-19

### Multi-pin, Interbus-S, Profibus-DP

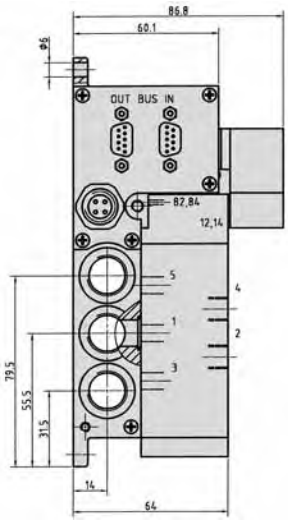



1 = pressure supply
2, 4 = outlets
3, 5 = exhausts
82, 84 = solenoid exhaust

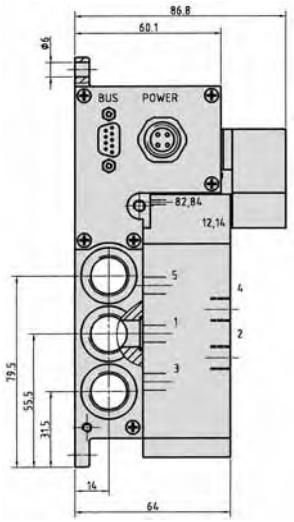
### Side view multi-pin




### Side view Interbus-S




### Side view Profibus-DP

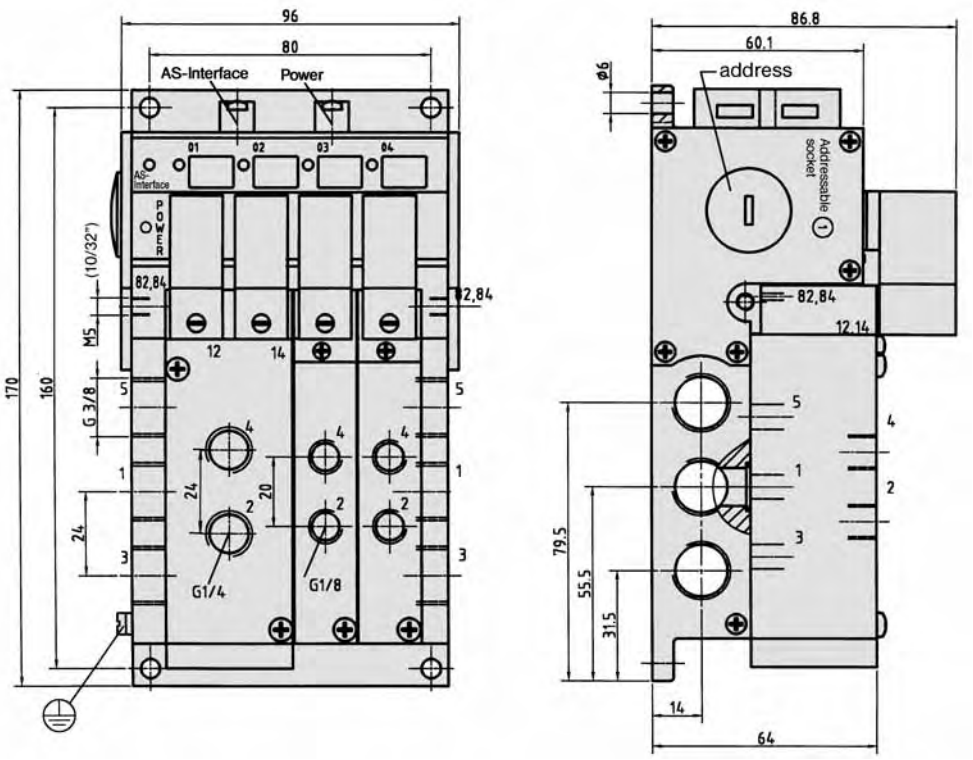



| Order number | A | B | Weight (without valves) |
|---|---|---|---|
| RE-19/4 | 113 | – | 0.93 kg (2.05 lbs.) |
| RE-19/6 | 149 | – | 1.26 kg (2.78 lbs.) |
| RE-19/8 | 186 | – | 1.59 kg (3.51 lbs.) |
| RE-19/10 | 222 | – | 1.92 kg (4.23 lbs.) |
| RE-19/12 | 259 | 129.5 | 2.25 kg (4.96 lbs.) |
| RE-19/14 | 295 | 147.5 | 2.58 kg (5.69 lbs.) |
| RE-19/16 | 332 | 166 | 2.91 kg (6.42 lbs.) |
| RE-19/18 | 369 | 184.5 | 3.24 kg (7.14 lbs.) |
| RE-19/20 | 405 | 202.5 | 3.57 kg (7.87 lbs.) |
| RE-19/22 | 442 | 221 | 3.90 kg (8.60 lbs.) |
| RE-19/24 | 478 | 239 | 4.23 kg (9.33 lbs.) |

## Dimensions for series

# RE-19

**RE-19/4-AS3**



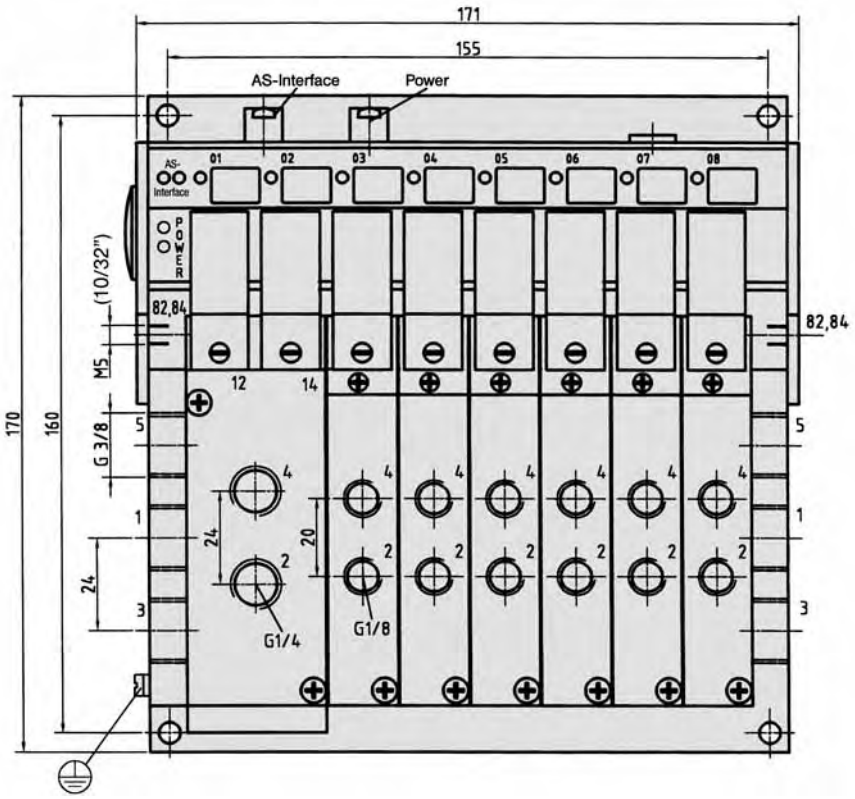

1 = pressure supply
2, 4 = outlets
3, 5 = exhausts
82, 84 = solenoid exhaust

Weight 0.82 kg
(1.81 lbs.)

## Dimensions for series

# RE-19

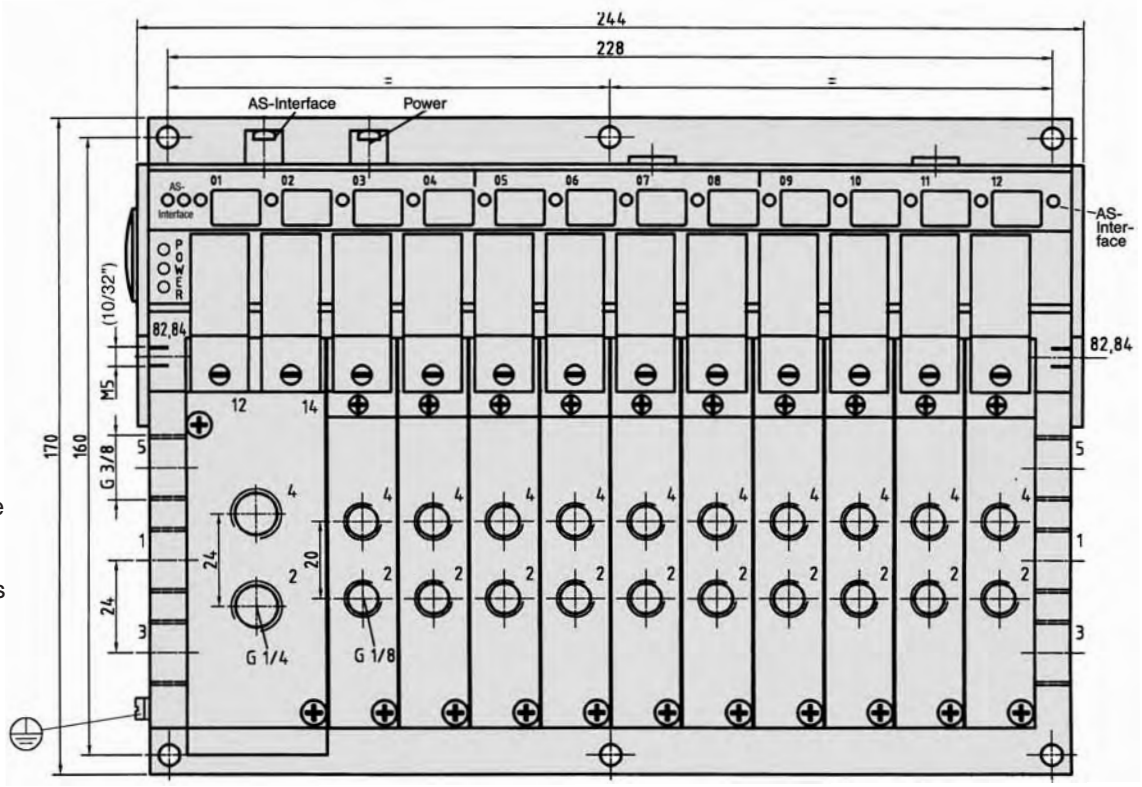
### RE-19/8-AS3




1 = pressure supply
2, 4 = outlets
3, 5 = exhausts
82, 84 = solenoid exhaust

Weight 1.48 kg
(3.26 lbs.)

### RE-19/12-AS3




1 = pressure supply
2, 4 = outlets
3, 5 = exhausts
82, 84 = solenoid exhaust

Weight 2.14 kg
(4.72 lbs.)

# Valve terminal RE-19 with Multi-pin, AS-Interface, Profi- or Interbus 4 – 24 valve stations, 950 – 2100 Nl/min (0.965 – 2.134 Cv)

## Valves and accessories for series

# RE-19

**Solenoid 23-M-09-19**
see page 4.284

### Valves

5/2-way,
single solenoid G 1/8
**KF-09-510-HN-442**
**KF-09-511-HN-442**

5/2-way,
single solenoid G 1/4
**KF-10-510-HN-442**
**KF-10-511-HN-442**

5/2-way,
double solenoid G 1/4
**KF-10-520-HN-442**

5/3-way,
center position closed G 1/4
**KF-10-530-HN-442**

5/3-way,
center position exhausted G 1/4
**KF-10-533-HN-442**

5/3-way,
center position pressurized G 1/4
**KF-10-534-HN-442**

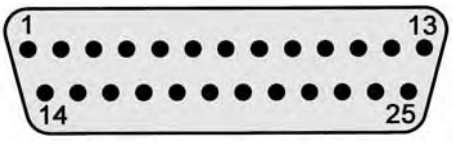
### Single elements

| | |
|---|---|
| **RE-19-DT** | Dividing plate for 2 different pressures |
| **RE-19-V** | Blind plate for valve position |
| **RE-19-V-E** | Blind plate for solenoid position |
| **RE-19-V-EP** | Blind plate for valve and solenoid position |
| **28-ST-68-M-105** | 25-pin multi-plug with 5 m cable |
| **28-ST-68-M-110** | 25-pin multi-plug with 10 m cable |
| **54-RE-19-A** | Operating manual RE-19, AS-Interface |
| **54-RE-19-B1** | Operating manual RE-19, Profibus-DP |
| **54-RE-19-B2** | Operating manual RE-19, Interbus-S |
| **54-RE-19-M** | Operating manual RE-19, Multi-pin |

**RE-99-E-50**
Adapter with NPT thread.
(Not for use with AS-Interface.)

## Pin assignment for connector cable 28-ST-68-M-...

| Pin | Valve | Wire colour | Pin | Valve | Wire colour | Pin | Valve | Wire colour |
|---|---|---|---|---|---|---|---|---|
| **1** | 1 | white | **12** | 12 | red/blue | **23** | GND | white/red |
| **2** | 2 | brown | **13** | 13 | white/green | **24** | GND | brown/red |
| **3** | 3 | green | **14** | 14 | brown/green | **25** | GND | white/black |
| **4** | 4 | yellow | **15** | 15 | white/yellow | | | |
| **5** | 5 | grey | **16** | 16 | yellow/brown | | | |
| **6** | 6 | pink | **17** | 17 | white/grey | | | |
| **7** | 7 | blue | **18** | 18 | grey/brown | | | |
| **8** | 8 | red | **19** | 19 | white/pink | | | |
| **9** | 9 | black | **20** | 20 | pink/brown | | | |
| **10** | 10 | violet | **21** | 21 | white/blue | | | |
| **11** | 11 | grey/pink | **22** | 22 | brown/blue | | | |




View on valve terminal

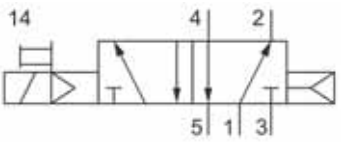
Wiring colour acc. to DIN 47100 (coloured or signed by numbers).

# Valve for
# valve terminal RE-19
# 950 – 2100 Nl/min (0.965 – 2.134 Cv)

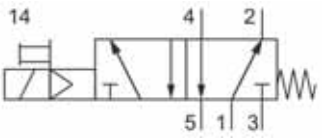
## Technical data for valves

# KF-09, KF-10

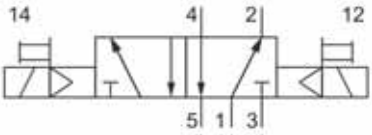
**Solenoid 23-M-09-19**
see page 4.284



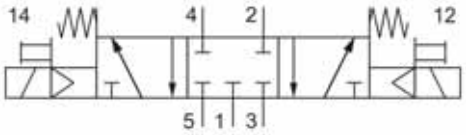

KF-09-510-HN-442
KF-10-510-HN-442



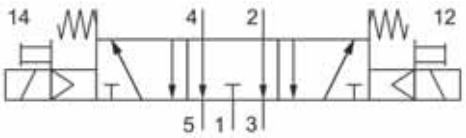

KF-09-511-HN-442
KF-10-511-HN-442



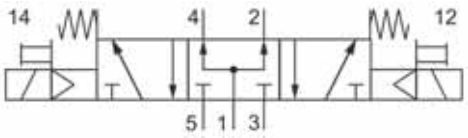

KF-10-520-HN-442




KF-10-530-HN-442




KF-10-533-HN-442




KF-10-534-HN-442

### Design and function

Spool valve actuated by an electrical signal.
Mounting screws are included.

| Order number[1] | KF-09-510-… | KF-09-511-… | KF-10-510-… | KF-10-511-… | KF-10-520-… | KF-10-530-… | KF-10-533-… | KF-10-534-… |
|---|---|---|---|---|---|---|---|---|
| **Function** | 5/2-way single solenoid air spring | 5/2-way single solenoid mech. spring | 5/2-way single solenoid air spring | 5/2-way single solenoid mech. spring | 5/2-way double solenoid | 5/3-way center position closed | 5/3-way center position exhausted | 5/3-way center position pressurized |
| **Connection** | G 1/8 at 2 and 4[2] | | G 1/4 at 2 and 4[2] | | | | | |
| **Nominal size** | 6 mm | | 9 mm | | | | | |
| **Nominal flow** | 950 Nl/min (0.965 Cv) | 810 Nl/min (0.823 Cv) | 2100 Nl/min (2.134 Cv) | 1800 Nl/min (1.829 Cv) | 2100 Nl/min (2.134 Cv) | 1500 Nl/min (1.524 Cv) | | |
| **Working pressure range** | 3 … 8 bar (44 … 116 psi) | | 2.5 … 8 bar (36 … 116 psi) | | | 3 … 8 bar (44 … 116 psi) | | |
| **Response time at 6 bar** | on 11 ms off 20 ms | on 10 ms off 26 ms | on 13 ms off 26 ms | on 18 ms off 29 ms | 16 ms | on 16 ms off 26 ms | | |
| **Temperature range** | – 10 °C … + 50 °C (+ 14 °F … + 122 °F) | | | | | | | |
| **Materials** | Body: Al (anodized), Seals: NBR; Inner parts: Al, stainless steel, brass | | | | | | | |
| **Operating voltage** | 24 V DC | | | | | | | |
| **Power consumption** | 2.5 W | | | | | | | |
| **Degree of protection** | IP 65 according to EN 60529, when assembled on RE-19 | | | | | | | |
| **Weight** | 0.20 kg (0.44 lb.) | | 0.37 kg (0.82 lb.) | | 0.43 kg (0.95 lb.) | | | |

[1] Please complete according to order code (see circuit symbols)

[2] Flange at ports 1, 3, 5

# Valve terminal RE-46 with Multi-pin, AS-Interface or Fieldbus, 4 – 24 valve stations, 950 Nl/min (0.965 Cv)

## Technical data for series

# RE-46

## Order code

RE-46/08-M-1-080

**Series**

**Number of stations**

**Electrical options**

| | |
|---|---|
| M-1 | = Multi-pin |
| AS3 | = AS-Interface |
| AS3-R… | = AS-Interface[1)] |
| B1-1 | = Profibus-DP |
| B3-1 | = DeviceNet |

**Pilot supply options**

0 = internal pilot supply (standard)
E = external pilot supply

**Tube connection options**

00 = G 1/8 at ports 2 and 4, G 3/8 at port 1
60 = ⌀ 6 mm at ports 2 and 4, ⌀ 10 mm at port 1
61 = ⌀ 6 mm at ports 2 and 4, ⌀ 8 mm at port 1
62 = ⌀ 6 mm at ports 2 and 4, ⌀ 12 mm at port 1
80 = ⌀ 8 mm at ports 2 and 4, ⌀ 10 mm at port 1
81 = ⌀ 8 mm at ports 2 and 4, ⌀ 8 mm at port 1
82 = ⌀ 8 mm at ports 2 und 4, ⌀ 12 mm at port 1

[1)] Valve terminals with AS-Interface are available with integrated sensor connectors, M8 bushing 3-pole

RE-46/04-AS3-R04-… 4 stations and 4 x M8 - bushing
RE-46/08-AS3-R08-… 8 stations and 8 x M8 - bushing
RE-46/12-AS3-R12-… 12 stations and 12 x M8 - bushing

## Design and function

Manifold system with integrated electrical connection including LED indicators. Each station can accomodate two 3/2-way valves or one 5/2- or 5/3-way valve. All connections are accessible from the front.

The valves and the multi-pin plug with cable must be ordered separately.

The valve terminal is delivered pre-assembled and function-tested. If not specified with the order, valve configuration is as follows:

Valves are mounted according to their order number, starting with high numbers at the side of the multi-pin, ending with low numbers on the opposite side, followed by blind plates (if ordered).

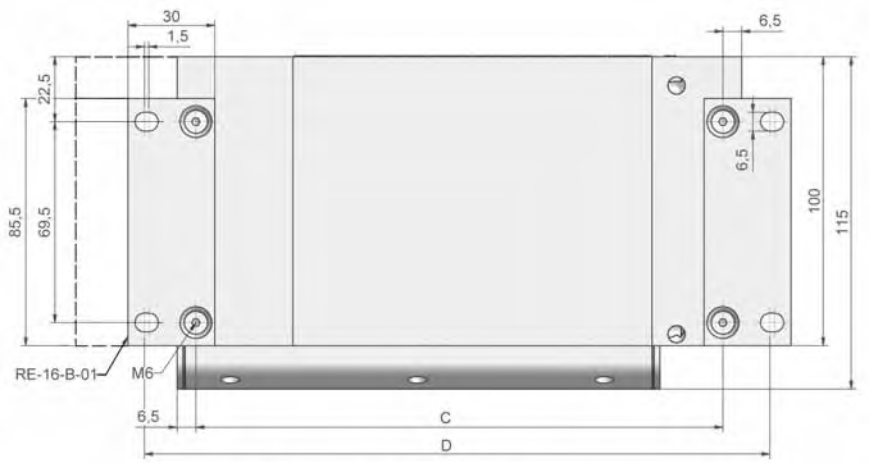
| Techn. data | | AS-Interface | Profibus-DP | DeviceNet | Multi-pin |
|---|---|---|---|---|---|
| Number of stations | | 4, 8, 12 | 6, 8, 10, 12 … 24 | | 4, 6, 8, 10 … 20 |
| Working pressure range | | 3 … 8 bar (44 … 116 psi) / 0 … 8 bar (0 … 116 psi) with external pilot supply | | | |
| Temperature range | | – 10 °C … + 50 °C (+ 14 °F … + 122 °F) | | | |
| Degree of protection | | IP 65 according to VDE 0470 / EN 60529 (with suitable connectors) | | | |
| Voltage | | Bus 18,5 V DC … 31,6 V DC<br>Power 24 V DC – 10 % + 15 % | 24 V DC ± 10 % | | 24 V DC –10 % + 15 % |
| Power consumption each solenoid | | 1.3 W / Valve solenoid*<br>0.6 W / Slave | 1.3 W / Valve solenoid*<br>2.9 W Bus system | 1.3 W / Valve solenoid*<br>2.5 W Bus system | 1.3 W / Valve solenoid* |
| Status display | LED Yellow | Valve solenoid energized | Valve solenoid energized | Valve solenoid energized | Valve solenoid energized |
| | LED Green | Power | Power | Power | – |
| | LED Green | Bus active (1 / slave) | Bus active | Bus active | – |
| | LED Green | – | – | Module active | – |
| | LED Red | Bus error (1 / slave) | Bus error | Bus error | – |
| | LED Red | – | – | Module error | – |
| EMC circuit | | Power with Polarized circuit protection and built-in surge protection | | | Polarized circuit protection, built-in surge protection |
| Electrical connections | | Power – ASi connector<br>Bus – ASi connector | Power – 5-pin M12 socket A-code<br>Bus 2 x – 5-pin M12 out-bushing B-code in-socket B-code | Power – 5-pin M12 socket B-code<br>Bus – 5-pin M12 socket A-code | Common GND D-SUB 25-pin, 4 … 12 stations<br>D-SUB 44-pin, 14 … 20 stations |
| Address selection | | Low voltage switch plug ⌀ 1.3 mm<br>Slave selection by DIP-switch | By 2 rotary switches | MAC – ID by 8-pin DIP-switch Bit 1 … 6 | – |
| Baud rate | | Standard address range 0 … 31 | Automatic adjustment 9,6 kBit/s … 12 Mbit/s | DIP-switch Bit 7 + 8 125, 250, 500 kBit/s | – |

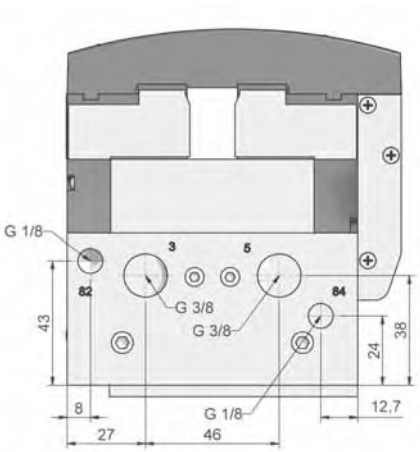
Bus termination resistance is available for Profibus-DP and DeviceNet as an accessory (see page 6.083).

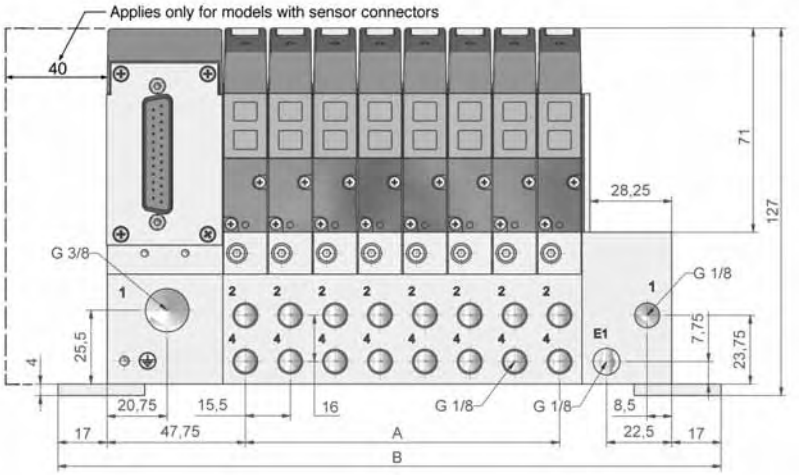
* The status display consumes 0.3 W of the 1.3 W power consumption.

## Dimensions for series

# RE-46

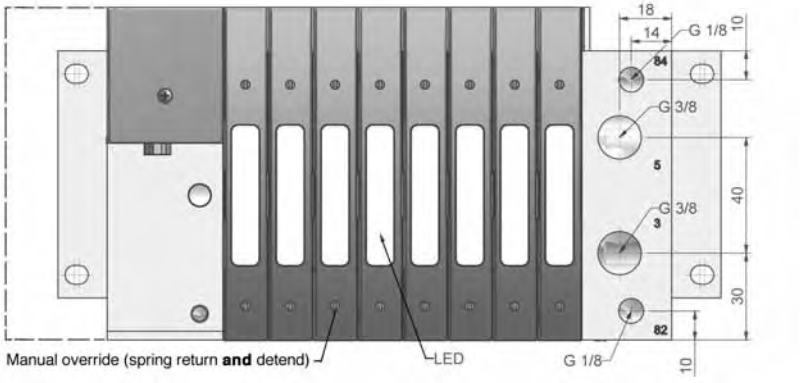



1 = pressure supply G 3/8 and G 1/8
E1 = external pilot supply G 1/8
2, 4 = outlets G 1/8
3, 5 = exhausts G 3/8
82, 84 = pilot exhaust G 1/8

The dimensions of AS-Interface and the different bus types are identical with the multi-pin model.
Six plugs, 4 x G 1/8 and 2 x G 3/8 are included.




| Order number | A | B | C | D |
|---|---|---|---|---|
| **RE-46/04-**... | 46.5 | 167 | 120 | 154 |
| **RE-46/06-**... | 77.5 | 198 | 151 | 185 |
| **RE-46/08-**... | 108.5 | 229 | 182 | 216 |
| **RE-46/10-**... | 139.5 | 260 | 213 | 247 |
| **RE-46/12-**... | 170.5 | 291 | 244 | 278 |
| **RE-46/14-**... | 201.5 | 322 | 275 | 309 |
| **RE-46/16-**... | 232.5 | 353 | 306 | 340 |
| **RE-46/18-**... | 263.5 | 384 | 337 | 371 |
| **RE-46/20-**... | 294.5 | 415 | 368 | 402 |
| **RE-46/22-**... | 325.5 | 446 | 399 | 433 |
| **RE-46/24-**... | 356.5 | 477 | 430 | 464 |

# Valve terminal RE-46 with Multi-pin, AS-Interface or Fieldbus, 4 – 24 valve stations, 950 Nl/min (0.965 Cv)

## Technical data for series

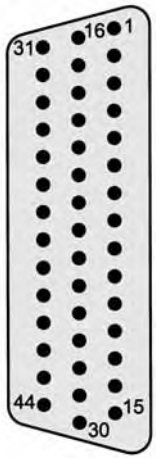
# RE-46

## Pin assignment

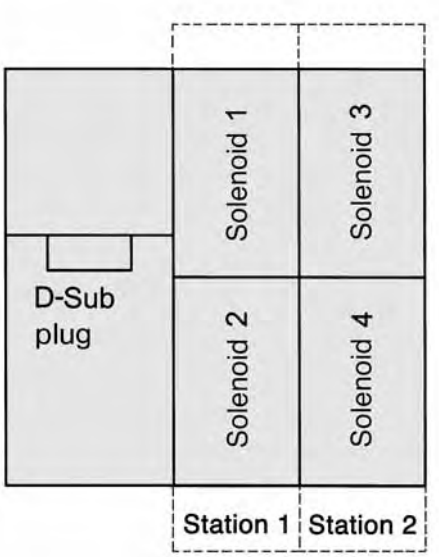
View on valve terminal

D-Sub 25-pin


D-Sub 44-pin




Solenoid layout




**Connector cable 28-ST-16-M1-25-…***
For valve terminals with 4 … 12 stations.

| Pin | Solenoid | Wire coding |
|---|---|---|
| 1 | GND | white |
| 2 | 1 | brown |
| 3 | 3 | green |
| 4 | 5 | yellow |
| 5 | 7 | grey |
| 6 | 9 | pink |
| 7 | 11 | blue |
| 8 | 13 | red |
| 9 | 15 | black |
| 10 | 17 | violet |
| 11 | 19 | grey-pink |
| 12 | 21 | red/blue |
| 13 | 23 | white/green |
| 14 | 2 | brown/green |
| 15 | 4 | white/yellow |
| 16 | 6 | yellow-brown |
| 17 | 8 | white/grey |
| 18 | 10 | grey-brown |
| 19 | 12 | white/pink |
| 20 | 14 | pink/brown |
| 21 | 16 | white/blue |
| 22 | 18 | brown/blue |
| 23 | 20 | white/red |
| 24 | 22 | brown/red |
| 25 | 24 | white/black |

**Connector cable 28-ST-16-M1-44-…***
For valve terminals with 14 … 20 stations.

| Pin | Solenoid | Wire coding | Pin | Solenoid | Wire coding |
|---|---|---|---|---|---|
| 1 | GND | white | 23 | 20 | white/red |
| 2 | 3 | brown | 24 | 23 | brown/red |
| 3 | 6 | green | 25 | 26 | white/black |
| 4 | 9 | yellow | 26 | 29 | brown/black |
| 5 | 12 | grey | 27 | 32 | grey/green |
| 6 | 15 | pink | 28 | 35 | yellow/grey |
| 7 | 18 | blue | 29 | 38 | pink/green |
| 8 | 21 | red | 30 | – | yellow/pink |
| 9 | 24 | black | 31 | 1 | green/blue |
| 10 | 27 | violet | 32 | 4 | yellow/blue |
| 11 | 30 | grey/pink | 33 | 7 | green/red |
| 12 | 33 | red/blue | 34 | 10 | yellow/red |
| 13 | 36 | white/green | 35 | 13 | green/black |
| 14 | 39 | brown/green | 36 | 16 | yellow/black |
| 15 | – | white/yellow | 37 | 19 | grey/blue |
| 16 | GND | yellow/brown | 38 | 22 | pink/blue |
| 17 | 2 | white/grey | 39 | 25 | grey/red |
| 18 | 5 | grey/brown | 40 | 28 | pink/red |
| 19 | 8 | white/pink | 41 | 31 | grey/black |
| 20 | 11 | pink/brown | 42 | 34 | pink/black |
| 21 | 14 | white/blue | 43 | 37 | blue/black |
| 22 | 17 | brown/blue | 44 | 40 | red/black |

Wiring colour acc. to DIN 47100 (coloured or signed by numbers).

* See page 6.083

## Valves and accessories for series

# RE-46

### Valves

| | |
|---|---|
| **KF-46-310/2-HN-S12** | 2 x 3/2 NC, with connector bridge |
| **KF-46-312/2-HN-S12** | 2 x 3/2 NO, with connector bridge |
| **KF-46-314/2-HN-S12** | 2 x 3/2 NO/NC, with connector bridge |
| **KF-46-510-HN-S12** | 5/2-way, with air spring return, with connector bridge |
| **KF-46-511-HN-S12** | 5/2-way, with spring return, with connector bridge |
| **KF-46-520-HN-S12** | 5/2-way, double solenoid, with connector bridge |
| **KF-46-530-HN-S12** | 5/3-way, center position closed, with connector bridge |
| **KF-46-533-HN-S12** | 5/3-way, center position exhausted, with connector bridge |
| **KF-46-534-HN-S12** | 5/3-way, center position pressurized, with connector bridge |

### Other single elements

Blind plate
**RE-16-V-EP**

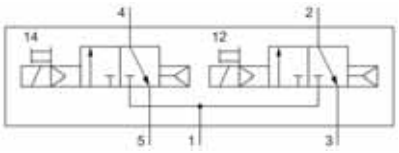
Blind plate
**RE-46-V-EP**

| | |
|---|---|
| **RE-19-DT** | Dividing plate for 2 different pressures |
| **RE-26-DS** | Seal kit for KF-26 and KF-46 |
| **RE-46-B-01** | Bracket for flange mounting |
| **RE-46-B-02** | Bracket for flange mounting (Terminals with sensor connectors) |
| **RE-46-DS** | Seal kit for KF-46 |
| **RE-46-RSV** | Check valve for dynamic exhaust pressure |
| **RE-16-V-EP** | Blind plate set |
| **RE-46-V-EP** | Blind plate set |
| **21-KF-46-01** | Mounting Kit (Seal, mounting clamp and screw for valve fixing) |
| **28-ST-16-M1-25-105** | Connector Multi-pin D-Sub, 25-pin with 5 m cable |
| **28-ST-16-M1-25-110** | Connector Multi-pin D-Sub, 25-pin with 10 m cable |
| **28-ST-16-M1-44-105** | Connector Multi-pin D-Sub, 44-pin with 5 m cable |
| **28-ST-16-M1-44-110** | Connector Multi-pin D-Sub, 44-pin with 10 m cable |
| **28-ST-RE-16-01-B1** | Connector kit RE-46, Profibus-DP, in and out |
| **28-ST-RE-16-02-B1** | Connector kit RE-46, Profibus-DP termination resistance |
| **54-RE-46-G** | Operating manual RE-46, AS-Interface, Profibus-DP, DeviceNet, Multi-pin |

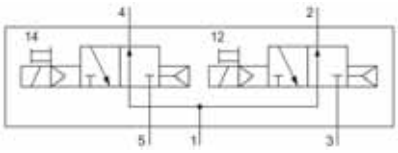
# Valve for
# Valve terminal RE-46
# 950 Nl/min (0.965 Cv)

## Technical data for valves

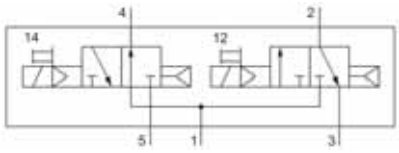
# KF-46




KF-46-310/2-HN-S12

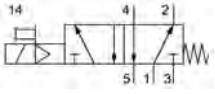



KF-46-312/2-HN-S12

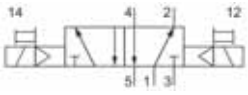



KF-46-314/2-HN-S12

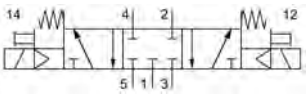

KF-46-510-HN-S12



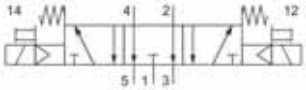

KF-46-511-HN-S12



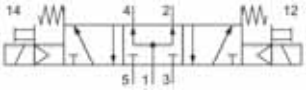

KF-46-520-HN-S12




KF-46-530-HN-S12




KF-46-533-HN-S12




KF-46-534-HN-S12


### Design and function

Spool valve actuated by an electrical signal.

| Order number* | KF-46-310/2-… | KF-46-312/2-… | KF-46-314/2-… | KF-46-510-… | KF-46-511-… | KF-46-520-… | KF-46-530-… | KF-46-533-… | KF-46-534-… |
|---|---|---|---|---|---|---|---|---|---|
| **Function** | 2 x 3/2-way NC | 2 x 3/2-way NO | 2 x 3/2-way 1 x NO 1 x NC | 5/2-way air spring return | 5/2-way mechanical spring return | 5/2-way double solenoid | 5/3-way center pos. closed | 5/3-way center pos. exhausted | 5/3-way center pos. pressurized |
| **Connection** | Flange | | | | | | | | |
| **Nominal size** | 4.5 mm | | | 6 mm | | | | | |
| **Nominal flow** | 430 Nl/min (0.437 Cv) NC<br>630 Nl/min (0.640 Cv) NO | | | 950 Nl/min (0.965 Cv) | 810 Nl/min (0.823 Cv) | 950 Nl/min (0.965 Cv) | 680 Nl/min (0.691 Cv) | | |
| **Pressure range** | | | | | | | | | |
| **Internal pilot supply** | Working pressure 2.5 … 8 bar (36 … 116 psi) | | | | | | Working pressure 3 … 8 bar (44 … 116 psi) | | |
| **External pilot supply** | Valves are not suitable | | | | Pilot pressure 3 … 8 bar / Working pressure 0 … 10 bar[1)] | | | | |
| **Response time at 6 bar** | on 15 ms off 28 ms | | | on 15 ms off 31 ms | on 14 ms off 33 ms | 20 ms | on 20 ms off 30 ms | | |
| **Temperature range** | – 10 °C … + 50 °C (+ 14 °F … + 122 °F) | | | | | | | | |
| **Materials** | Body: Al (anodized), plastic, Seals: NBR; Inner parts: Al, stainless steel, brass | | | | | | | | |
| **Operating voltage** | 24 V DC – 10 % … + 15 % | | | | | | | | |
| **Power consumption** | 1 W per solenoid, 0.3 W per LED | | | | | | | | |
| **Degree of protection** | IP 65 according to EN 60529, when assembled on RE-46 | | | | | | | | |
| **Weight** | 0.19 kg (0.42 lb.) | | | 0.16 kg (0.35 lb.) | | 0.19 kg (0.42 lb.) | | | |

* Please complete according to order code (see circuit symbols)

[1)] For KF-46-511-… the pilot pressure must be higher than the working pressure.