

Electrically operated valves

Series MF-04 for manifold mounting, 5/2- and 5/3-way
G1/8 • 360 NI/min (0.366 Cv)



Order code

MF-04-510-HN-442

Series and function

Coil options

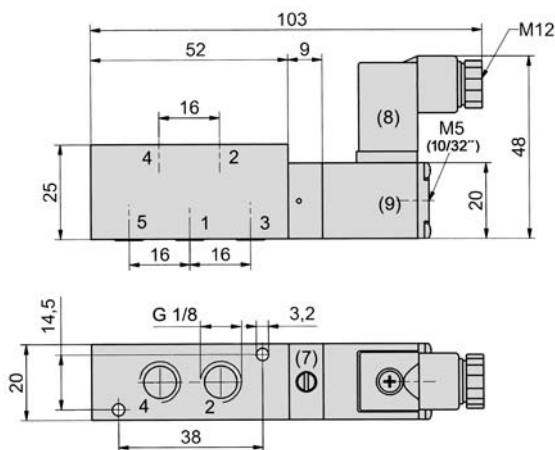
(plug pins on top, see pictures)
441 = 12 V DC without plug socket
442 = 24 V DC without plug socket

(plug pins bottom, at ports 1, 3, 5)
411 = 12 V DC without plug socket
412 = 24 V DC without plug socket

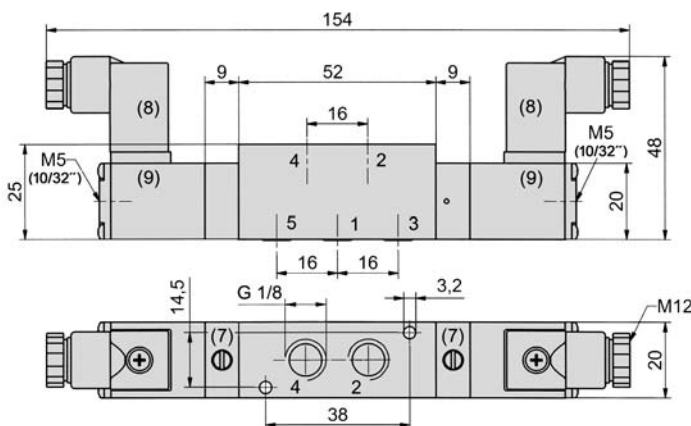
Design, function and technical data

Spool valve is actuated by an electrical signal. Mounting screws and gaskets included in scope of delivery.

MF-04-510-HN



MF-04-520-HN, MF-04-530-HN, MF-04-533-HN



- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- (7) = manual override (detent) can be repositioned by 4 x 90°
- (8) = plug socket can be repositioned by 180°
- (9) = solenoid coil can be repositioned by 4 x 90°

Note:
 Plug socket(s) not included in scope of delivery.

Order number	MF-04-510-HN-...	MF-04-520-HN-...	MF-04-530-HN-...	MF-04-533-HN-...
Please complete according to order code.				
Function	5/2-way single solenoid	5/2-way double solenoid	5/3-way center position exhausted	5/3-way center position open
Connection	G1/8 at 2 and 4, flange at 1, 3, 5			
Nominal size	4 mm			
Flow rate	360 NI/min (0.366 Cv)			
Pressure range	2.5 ... 8 bar (36 ... 116 psi)		3 ... 8 bar (43 ... 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			
Medium	Compressed air in accordance with ISO 8573-1:2010, Class 7:2:4 – and free of aggressive additives.			
Standard voltage	24 V DC			
Power consumption	2 W			
Degree of protection	IP 65 according to EN 60529			
Weight	0.112 kg (0.246 lb.)	0.181 kg (0.398 lb.)	0.180 kg (0.396 lb.)	0.178 kg (0.392 lb.)

Solenoid coil, plug sockets

Solenoid coil	23-M-20-...	Standard coil	page 4.282
Plug sockets	28-ST-02-01	Standard plug socket	page 4.284
	28-ST-09-...	Plug socket with LED	page 4.284
	28-ST-10-...	Plug socket with LED and circuit protection	page 4.284
	28-ST-10-K3-...	Plug socket with LED, circuit protection and cable	page 4.284
	28-ST-02-2-07	Plug socket with M12 plug connection, LED and circuit protection	page 4.284
	28-ST-02-2-05	Plug socket with M8 plug connection, LED and circuit protection	page 4.284

Modular manifolds



Manifolds will be delivered completely assembled upon request.



Manifold.
Available from 2 to 12 stations
RF-24/n-P
page 4.212



Base element,
available with 1, 3, 5, 7, 9 and 11 stations.
RF-24/n-G



End plate
with one valve station
RF-24-E



Add-on element 1
RF-24-W1



Add-on element 2
RF-24-W2



Clamp for
DIN-rail mounting
RF-04-K

Other elements: **RF-04-V** Blind plate for blank valve station
RE-04-DT Seal plate for two different pressures

User Information

The manifold RF-24 is an expandable system for valve series MF-04. The assembled manifold includes the base element (RF-24/n-G) and the end plate (RF-24-E).

The base element is available with 1, 3, 5, 7, 9 and 11 valve stations. The end plate includes 1 valve station. For odd-numbered stations one element RF-24-W1 is mounted between the base element and end plate.

For future expansion add-on elements are required. For even numbered stations begin with the element RF-24-W1. For odd numbered stations begin with the element RF-24-W2. All necessary seals and mounting screws are included with each element.

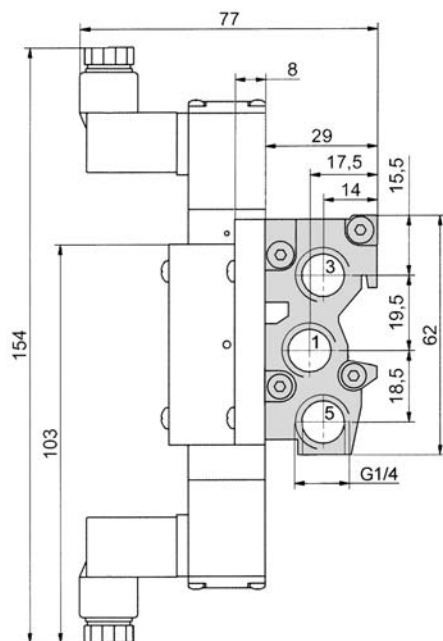
Manifolds can be mounted using the through holes or on a DIN rail using RF-04-K clamp.

Electrically operated valves

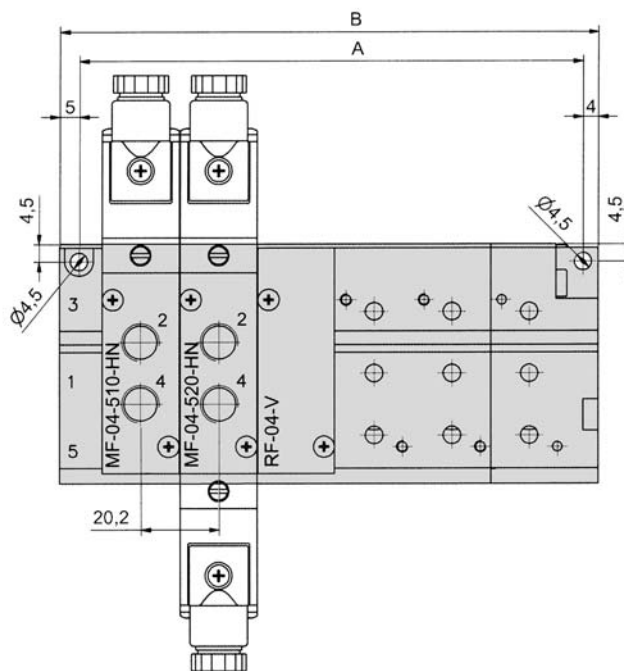
Manifolds RF-24 for series MF-04



Manifolds with 2 to 6 stations



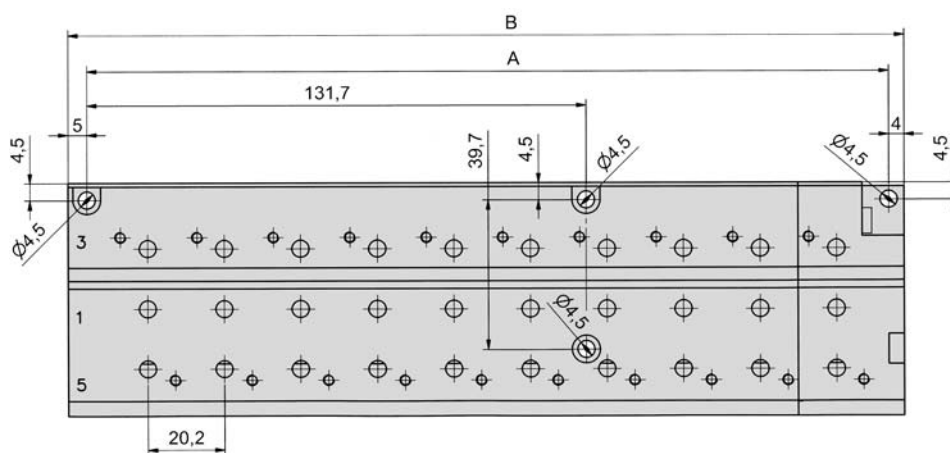
Side view for any number of stations.



Manifolds with 2 to 6 stations.

- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts

Manifolds with 8 to 12 stations.



- 1 = outlets
- 3, 5 = exhausts

If the manifold is extended, the dimensions A and B will increase by 20.2 mm for each station.

Material: Al (anodized)

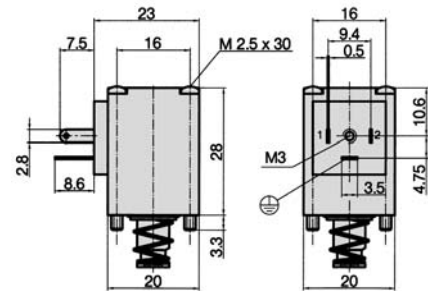
Order number	A	B	Weight	Included elements
RF-24/2-P	50	59	0.202 kg (0.445 lb.)	1 x RF-24/1-G, 1 x RF-24-E
RF-24/4-P	90.4	99.4	0.324 kg (0.714 lb.)	1 x RF-24/3-G, 1 x RF-24-E
RF-24/6-P	130.8	139.8	0.447 kg (0.985 lb.)	1 x RF-24/5-G, 1 x RF-24-E
RF-24/8-P	171.2	180.2	0.567 kg (1.250 lbs.)	1 x RF-24/7-G, 1 x RF-24-E
RF-24/10-P	211.6	220.6	0.708 kg (1.561 lbs.)	1 x RF-24/9-G, 1 x RF-24-E
RF-24/12-P	252	261	0.831 kg (1.832 lbs.)	1 x RF-24/11-G, 1 x RF-24-E

Accessories for electrically operated valves

Solenoid coils and plug sockets



Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape C



Order number	23-M-20-411	23-M-20-412
Standard voltage	12 V DC	24 V DC
Power consumption	2 W	2 W
Degree of protection	IP 65 according to EN 60529 with connected plug socket	
Duty cycle	100 %	
Temperature range	- 20 °C ... + 50 °C	
Voltage tolerance	± 10 %	
Standard for series	MS-20, MF-04	

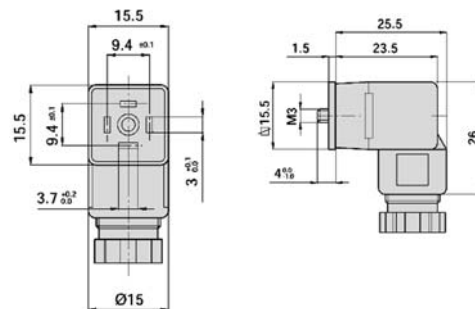
Accessories for electrically operated valves

Plug sockets for coil



Plug sockets pursuant to DIN EN 175301-803 Shape C

(2pol. + PE, 15,5 x 15,5 mm, Contact distance 9,4 mm)

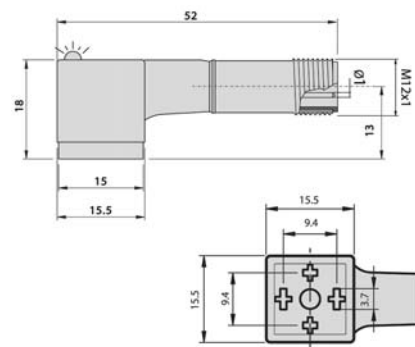
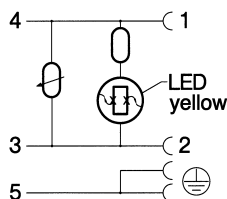


Order number	28-ST-02-01	28-ST-09-112	28-ST-09-127	28-ST-10-112	28-ST-10-127	28-ST-10-K3-112	28-ST-10-K3-127
Standard voltage	all	24 V DC	230 V AC	24 V DC	230 V AC	24 V DC	230 V AC
Protective circuit	no	no	no	yes	yes	yes	yes
Status indicator	without	yes	yes	yes	yes	yes	yes
Degree of protection	IP 65 pursuant to EN 60529 requires a flat gasket						
Connecting cable	without					3 m	3m
max. Ø Connecting cable	6,5 mm					-	-
Max. wire cross section	0,75 mm ²					-	-
for coil	23-M-20						

Plug sockets with integrated adaptor for M8/M12

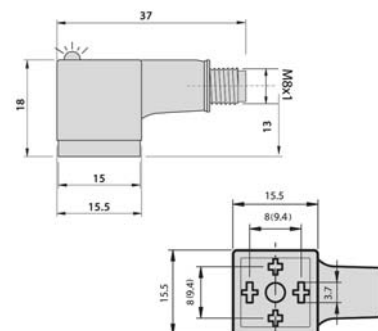
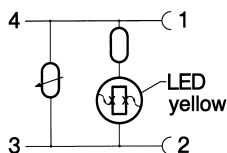
(2pol. + PE, 15,2 x 15,8 mm, Contact distance 8 bzw. 9,4 mm)

Plug socket 28-ST-02-2-07



2 = not connected 4 = +24 Volt (+)
3 = 0 Volt (-) 5 = ⊕

Plug socket 28-ST-02-1-05 and 28-ST-02-2-05



2 = +24 Volt (+)
3 = 0 Volt (-)
4 = not connected

Order number	28-ST-02-1-05	28-ST-02-2-05	28-ST-02-2-07
Standard voltage	24 V DC		
Protective circuit	yes		
Status indicator	yes		
Degree of protection	IP 65 pursuant to EN 60529 requires a flat gasket		
Contact distance	8 mm	9,4 mm	9,4 mm
for plug sockets	M8	M8	M12
for coil	23-M-09-19	23-M-20	