

Electrically operated valves

Series MF-07 for manifold mounting, 5/2- and 5/3-way
G1/4 • 1500 to 1720 NI/min (1.524 to 1.748 Cv)



Order code

MF-07-510-HN-442

Series and function

Coil options

Standard coils¹⁾

- 441 = 12 V DC, 4.2 W
- 442 = 24 V DC, 4.2 W
- 452 = 24 V AC, 7/4 VA
- 456 = 115 V AC, 7/4 VA
- 457 = 230 V AC, 7/4 VA
- 461 = 12 V DC, 2.2 W²⁾
- 462 = 24 V DC, 2.2 W²⁾

Without coil and plug socket

- 570 = Power consumption 4.2 W, 7/4 VA
- 560 = Power consumption 2.2 W²⁾

Coil with M12 connector and LED

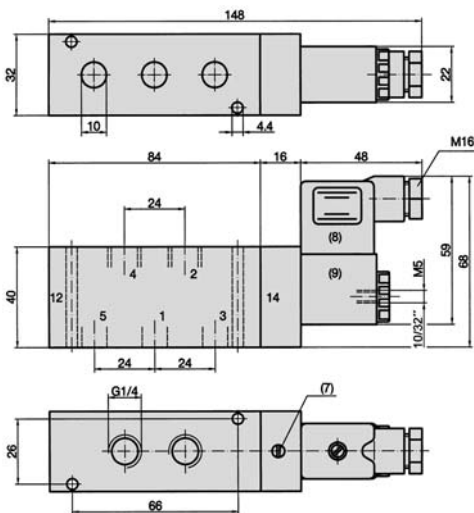
- O42 = 24 V DC, 4.8 W
- O62 = 24 V DC, 2.5 W²⁾

¹⁾ Plug socket(s) not included in scope of delivery (see page 4.262).

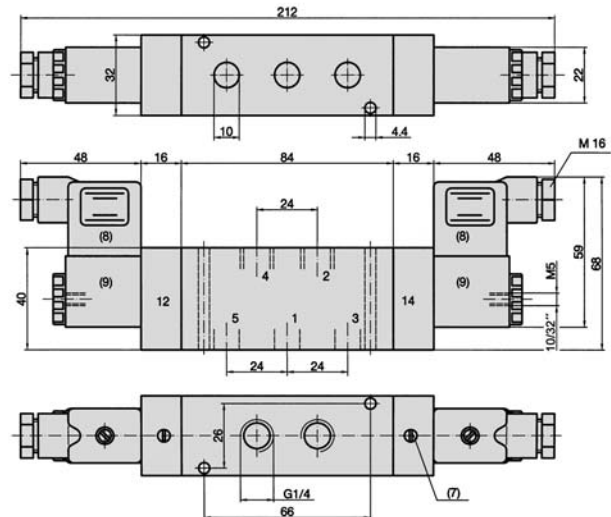
Design, function and technical data

Spool valve actuated by an electrical signal. Please specify required control voltage when ordering.
This valve series is designed for the mounting on the modular manifolds series RF-07.
Mounting screws included in scope of delivery.

MF-07-510-HN, MF-07-511-HN



MF-07-520-HN, MF-07-530-HN, MF-07-533-HN



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

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

Order number	MF-07-510-HN	MF-07-511-HN	MF-07-520-HN	MF-07-530-HN	MF-07-533-HN
Please complete according to order code.					
Function	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 exhausted	5/3-way center position open
Connection	G1/4 at 2 and 4, flange at 1, 3, 5				
Nominal size	10 mm			9 mm	
Flow rate	1720 NI/min (1.748 Cv)			1500 NI/min (1.524 Cv)	
Pressure range	1,5 ... 10 bar ²⁾ (22 ... 145 psi)	2,5 ... 10 bar ²⁾ (36 ... 145 psi)	2 ... 10 bar ²⁾ (29 ... 145 psi)	3 ... 10 bar ²⁾ (43 ... 145 psi)	
Response time at 6 bar	on 19 ms off 27 ms	on 19 ms off 33 ms	13 ms	on 14 ms off 16 ms	
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)				
Materials	Body: Al (anodized), Seals: NBR and POM, Inner parts: Al, stainless steel and brass				
Medium	Compressed air in accordance with ISO 8573-1:2010, Class 7:2:4 – and free of aggressive additives.				
Degree of protection	IP 65 according to EN 60529				
Weight	0,409 kg (0.902 lb.)	0,414 kg (0.913 lb.)	0,573 kg (1.263 lbs.)	0,545 kg (1.201 lbs.)	

²⁾ max. 8 bar (max. 116 psi) at 2.2 W and 2.5 W.

Solenoid coils, actuators

Solenoid coils	23-SP-011-...	Standard coil	page 4.280
	23-SP-012-...	Coil with 2,2 W power consumption	page 4.280
	23-SP-011-5-O12	Coil with M12 plug connection, 4,8 W, LED and circuit protection	page 4.282
	23-SP-012-5-O32	Coil with M12 plug connection, 2,5 W, LED and circuit protection	page 4.282
Actuators	23-R-013	Standard actuator	
	23-R-014	Low power actuator	
Plug sockets	28-ST-01	Standard plug socket	page 4.283
	28-ST-04-...	Plug socket with LED	page 4.283
	28-ST-06-...	Plug socket with LED and circuit protection	page 4.283
	28-ST-06-K3-...	Plug socket with LED, circuit protection and cable	page 4.283

User information

Low power consumption coils (2.2 W or 2.5 W) are for pressures up to 8 bar (116 psi) only. Valve actuator 23-R-014 is required. The actuator 23-R-014 is nickel plated. Make sure that the coils with the right power consumption are used.

For outdoor applications or in areas with high humidity use coil 23-SP-011-1-... or 23-SP-012-1-... (see page 4.280).

The following types are available on request

Coils and sockets with contacts according to DIN EN 175301-803 type B (U-form).

Plug sockets with molded cable.

Modular manifolds



Manifolds will be delivered completely assembled with valves if requested.



Manifold.
Available from 1 to 12 stations
RF-07/n
page 4.263



Single sub-base G1/4 side ports
RF-071
page 4.263



Single sub-base G1/4 bottom ports
RF-072
page 4.263



Blind plate for blank valve station
RF-07-V



Single sub-base
RF-07



End plate (pair)
RF-07-E



Adapter plate for external pressure
RF-07/ZE

Other elements:

- RO-070** 3 O-rings for sealing between two elements
- RO-071** Separation plate to feed in different pressures
- RO-072** Seal between valve and manifold
- RZ-07/n** Tie rods (1 pair), n = indicates the number of stations
- RZ-07** Tie rod extensions for one station (1 pair)

Electrically operated valves

Manifolds RF-07 for series MF-07



Dimensions for manifold RF-07



1 = pressure inlet
3, 5 = exhausts

RF-07-V

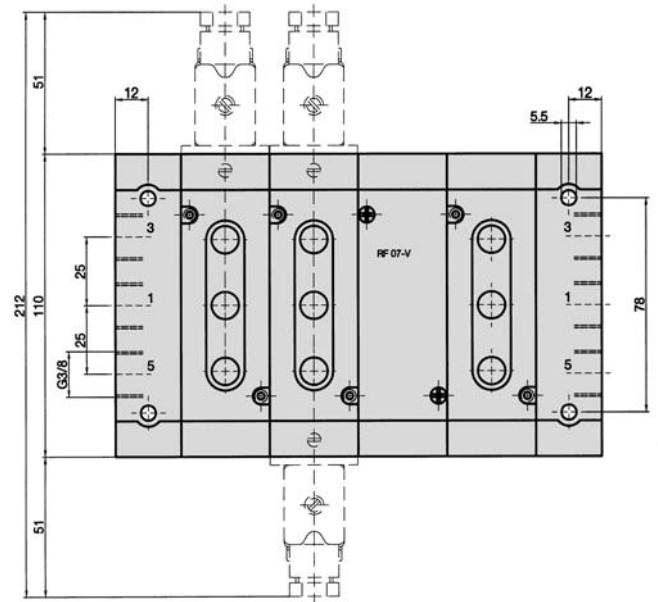
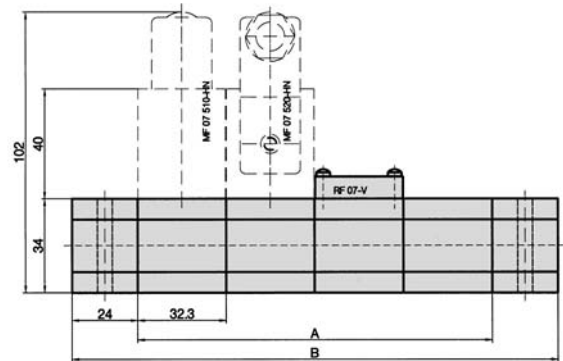
Blind plate for blank station.
Material: Al (anodized).

RF-07/n

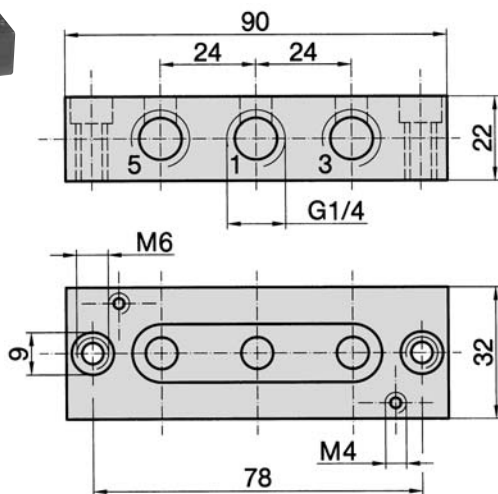
Sub-base suitable for valve series MF-07. The seal (RO-072) between valve and manifold is included.

Material: plastic, brass, NBR.

Order number	A	B	Weight
RF-07/1	32.3	80.3	0.280 kg (0.617 lb.)
RF-07/2	64.6	112.6	0.360 kg (0.794 lb.)
RF-07/3	96.9	144.9	0.440 kg (0.970 lb.)
RF-07/4	129.2	177.2	0.520 kg (1.146 lbs.)
RF-07/5	161.5	209.5	0.600 kg (1.323 lbs.)
RF-07/6	193.8	241.8	0.680 kg (1.499 lbs.)
RF-07/7	226.1	274.1	0.760 kg (1.675 lbs.)
RF-07/8	258.4	306.4	0.840 kg (1.852 lbs.)
RF-07/9	290.7	338.7	0.920 kg (2.028 lbs.)
RF-07/10	323	371	1.000 kg (2.204 lbs.)
RF-07/11	355.3	403.3	1.080 kg (2.381 lbs.)
RF-07/12	387.6	435.6	1.160 kg (2.557 lbs.)



Dimensions for RF-071

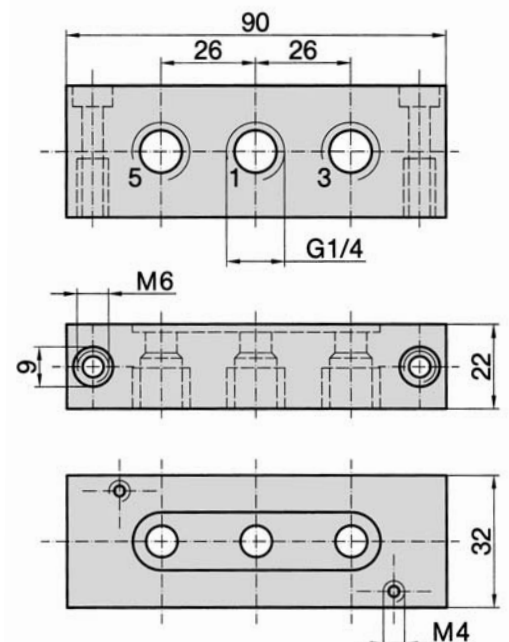


Material: Al (anodized),
O-rings: NBR

1 = pressure inlet
3, 5 = exhausts

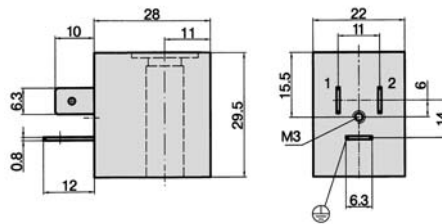
The seal (RO-072) between valve and sub-base is included.

Dimensions for RF-072



Accessories for electrically operated valves

Solenoid coils



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

Order number	23-SP-011-411	23-SP-011-412	23-SP-011-422	23-SP-011-426	23-SP-011-427	23-SP-012-431	23-SP-012-432
Standard voltage	12 V DC	24 V DC	24 V AC	115 V AC	230 V AC	12 V DC	24 V DC
Power consumption DC	4.2 W	4.2 W				2.2 W	2.2 W
Power consumption 50 Hz			4 VA	4 VA	4 VA		
Degree of protection	IP 65 according to EN 60529 with connected plug socket						
Duty cycle	100 %						
Temperature range	- 20 °C ... + 50 °C (- 4 °F ... + 122 °F)						
Voltage tolerance	± 10 %						
Standard for series	MS-18, M-04, M-05, M-07, M-22, KM-09, KM-10, MF-05, MF-07, MN-06, KN-05, MI-01, MI-02, MI-03						

Other voltages on request.

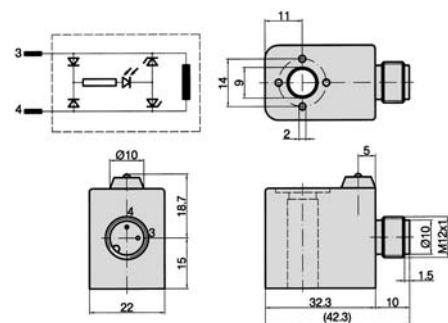
Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape B

(with enhanced humidity resistance)

Order number	23-SP-011-1-711	23-SP-011-1-712	23-SP-011-1-712	23-SP-011-1-722	23-SP-011-1-725	23-SP-011-1-727	23-SP-012-1-732
Standard voltage	12 V DC/24 V AC	24 V DC	48 V AC	12 V DC/24 V AC	110 V AC	230 V AC	24 V DC
Power consumption DC	4.6 W	4.8 W	-	5.5 W	-	-	2.5 W
Power consumption 50 Hz	7.1 VA	-	7.7 VA	8.9 VA	8.5 VA	7.9 VA	
Degree of protection	IP 65 according to EN 60529 with connected plug socket *1						
Duty cycle	100 %						
Temperature range	- 20 °C ... + 50 °C (- 4 °F ... + 122 °F)						
Voltage tolerance	± 10 %						
Standard for series	KMX-09, KMX-10, ICK-09, ICK-10, KN-55, KNX-55, ICKN-55						

*1: IP67 pursuant to EN 60529 with plug socket and sealing set 20-SP-011/012-02

Solenoid coils with M12 connection, with LED and protective circuit.



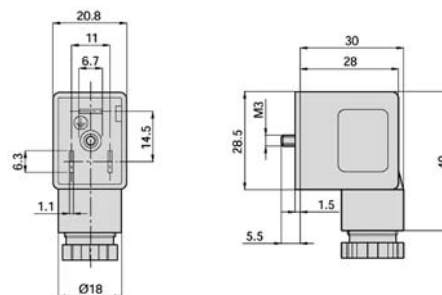
Order number	23-SP-011-5-O12	23-SP-012-5-O32
Standard voltage	24 V DC	24 V DC
Power consumption	4.8 W	2.5 W
Degree of protection	IP 65 according to EN 60529 with connected cable	
Duty cycle	100 %	
Temperature range	- 20 °C ... + 50 °C	
Voltage tolerance	± 10 %	

Accessories for electrically operated valves

Plug sockets for coil



Plug sockets pursuant to DIN EN 175301-803 Shape B
 (2pol. + PE, 21 x 28 mm, Contact distance 11 mm)



Order number	28-ST-01	28-ST-04-112	28-ST-04-127	28-ST-06-112	28-ST-06-127	28-ST-06-K3-112	28-ST-06-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
Ø Connecting cable	6 – 8 mm					–	–
Max. wire cross section	1,5 mm ²					–	–
for coil	23-SP-011, 23-SP-011-1						

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