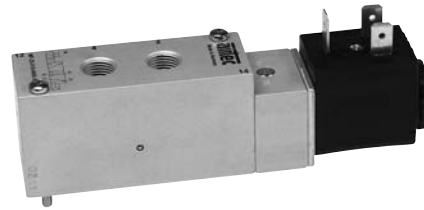


Electrically operated valves

Series MF-05 and MF-25 for manifold mounting, 5/2- and 5/3-way
G1/8 • 560 and 650 NI/min (0.569 and 0.661 Cv)



Order code

MF-25-510-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 4.222).

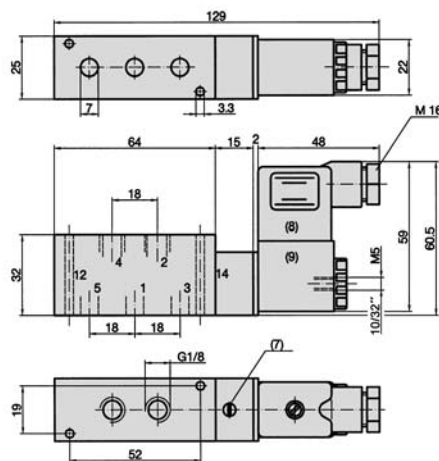
Design, function and technical data

Spool valve actuated by an electrical signal.

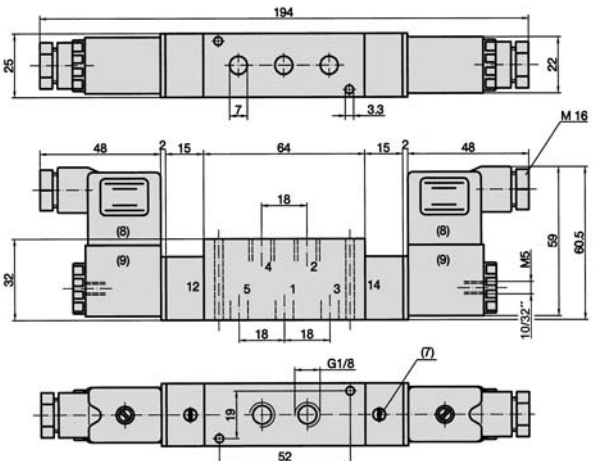
This valve series is designed for the mounting on modular manifolds series RF-05.

Mounting screws included in scope of delivery.

MF-25-510-HN, MF-25-511-HN



MF-05-520-HN, MF-05-530-HN, MF-05-533-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 4 x 90°
- (8) = plug socket can be repositioned by 180°
- (9) = solenoid coil can be repositioned by 4 x 90°

Order number	MF-25-510-HN	MF-25-511-HN	MF-05-520-HN	MF-05-530-HN	MF-05-533-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 closed	5/3-way center position open
Connection	G1/8 at 2 and 4, flange at 1, 3 and 5.				
Nominal size	6 mm			5 mm	
Flow rate	650 NI/min (0.661 Cv)			560 NI/min (0.569 Cv)	
Pressure range	2 ... 10 bar ²⁾ (29 ... 145 psi)	3 ... 10 bar ²⁾ (43 ... 145 psi)	2 ... 10 bar ²⁾ (29 ... 145 psi)	3 ... 10 bar ²⁾ (43 ... 145 psi)	
Response time at 6 bar	on 13 ms off 16 ms	on 11 ms off 18 ms	12 ms	on 13 ms off 15 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	0,243 kg (0.536 lb.)	0,244 kg (0.538 lb.)	0,352 kg (0.776 lb.)	0,351 kg (0.774 lb.)	

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-011	Standard actuator	
	23-R-012	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-012 is required. The actuator 23-R-012 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 upon request.



Manifold.
Available from 1 to 12 stations
RF-05/n
page 4.223



Single sub-base G1/8
side ports
RF-051
page 4.223



Single sub-base G1/8
bottom ports
RF-052
page 4.223



Blind plate for blank valve
station
RF-05-V



Single sub-base
RF-05



End-plate (pair)
RF-05-E



Adapter plate for external
pressure
RF-05/ZE

Other elements: **RO-050** 3 O-rings for sealing between two elements
RO-051 Separation plate to feed in different pressures
RO-052 Seal between valve and manifold
RZ-05/n Tie rods (1 pair), n = indicates the number of stations
RZ-05 Tie rod extensions for one station (1 pair)

Electrically operated valves

Manifolds RF-05 for series MF-05 and MF-25



Dimensions for manifold RF-05



1 = pressure inlet
3, 5 = exhausts

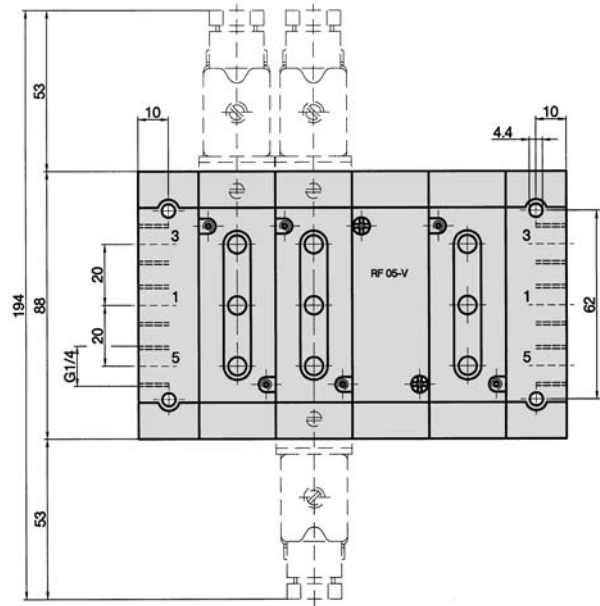
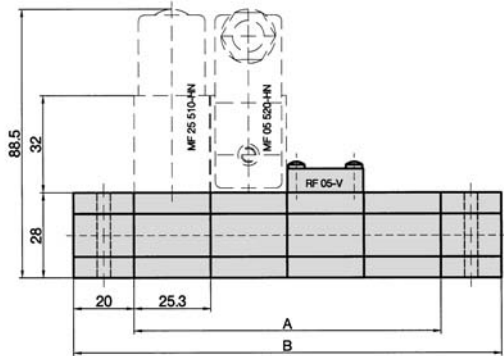
RF-05-V

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

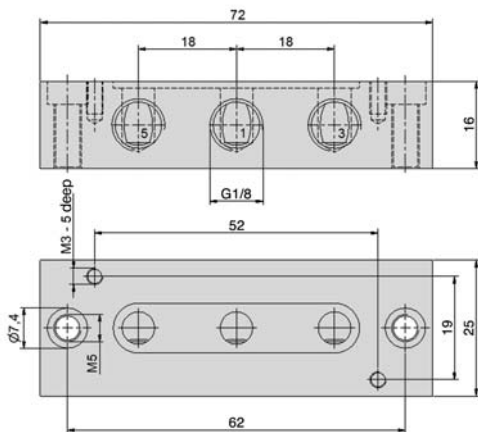
RF-05/n

Manifold suitable for valve series MF-05 and MF-25. The seal (RO-052) between the valve and manifold is included.
Material: plastic, brass, NBR.

Order number	A	B	Weight
RF-05/1	25.3	65.3	0.160 kg (0.353 lb.)
RF-05/2	50.6	90.6	0.205 kg (0.452 lb.)
RF-05/3	75.9	115.9	0.250 kg (0.551 lb.)
RF-05/4	101.2	141.2	0.295 kg (0.650 lb.)
RF-05/5	126.5	166.5	0.340 kg (0.749 lb.)
RF-05/6	151.8	191.8	0.385 kg (0.849 lb.)
RF-05/7	177.1	217.1	0.430 kg (0.948 lb.)
RF-05/8	202.4	242.4	0.475 kg (1.047 lbs.)
RF-05/9	227.7	267.7	0.520 kg (1.146 lbs.)
RF-05/10	253	293	0.565 kg (1.245 lbs.)
RF-05/11	278.3	318.3	0.610 kg (1.345 lbs.)
RF-05/12	303.6	343.6	0.655 kg (1.444 lbs.)



Dimensions for RF-051

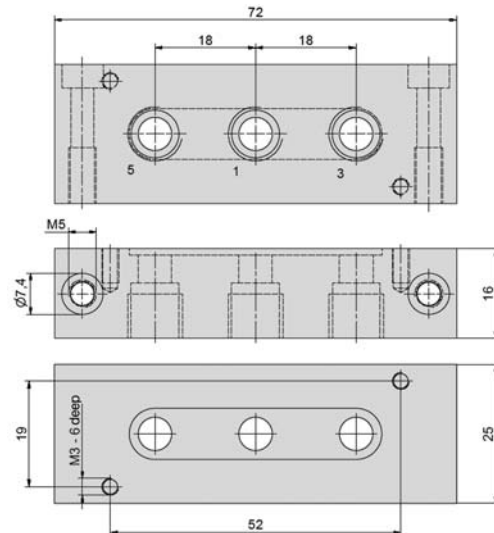


Material: Al (anodized),
O-rings: NBR

1 = pressure inlet
3, 5 = exhausts

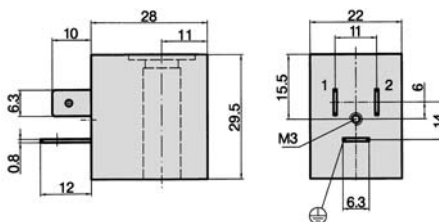
The seal (RO-052) between valve and sub-base is included.

Dimensions for RF-052



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.

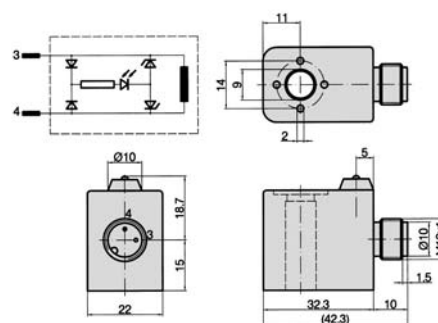
Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape B

(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.



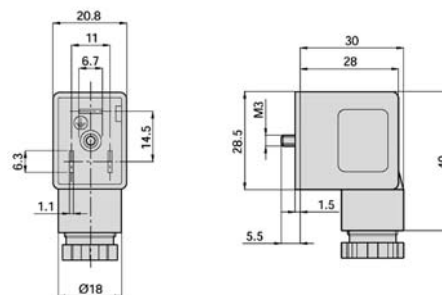
Order number	23-SP-011-5-O12	23-SP-012-5-O32
Standard voltage	24 V DC	24 V DC
Power consumption	4.8 W	2.5 W
Degree of protection	IP 65 according to EN 60529 with connected cable	
Duty cycle	100 %	
Temperature range	- 20 °C ... + 50 °C	
Voltage tolerance	± 10 %	

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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