

Electrically operated valves

Series M-07, 3/2-, 5/2- and 5/3-way

G1/4 • 1300 and 1580 NI/min (1.321 and 1.606 Cv)



Order code

M-07-310-HN-442

Coil options^{1) 2)}

Series and function	Standard coil		Without coil and plug socket	
	HN at port 2 + 4	HN at port 1, 3 + 5	HN at port 2 and 4	HN at port 1, 3 and 5
441	12 V DC, 4,2 W	411	570	Power consumpt. 4.2 W, 7/4 VA
442	24 V DC, 4,2 W	412	560	Power consumption 2.2 W ²⁾
452	24 V AC, 7/4 VA	422	Coil with M12 connector and LED	
456	115 V AC, 7/4 VA	426		
457	230 V AC, 7/4 VA	427	HN at port 2 and 4	
461	12 V DC, 2,2 W ²⁾	431	O42	24 V DC, 4,8 W
462	24 V DC, 2,2 W ²⁾	432	O62	24 V DC, 2,5 W ²⁾
				HN at port 1, 3 and 5
				500
				530
				O12
				O32

Plug socket(s) not included in scope of delivery (see page 4.153).

Design, function and technical data

Spool valve actuated by an electrical signal. Please specify required control voltage when ordering.

Valves of this series are available in explosion proof design in accordance with 2014/34/EU (ATEX). For further details see chapter 13 of this catalogue.

3/2-way valve

¹⁾ Manual override (HN) is on the side of port 2 by default. It can be easily repositioned by 180° (side of ports 1 and 3).



Order number Please complete according to order code.	M-07-310-HN	MO-07-310-HN	M-07-311-HN	MO-07-311-HN	M-07-320-HN	ME-07-311-HN	ME-07-320-HN	
Function	normally closed air spring return	normally open air spring return	normally closed spring return	normally open spring return	double solenoid	ext. pilot supply spring return	double solenoid ext. pilot supply	
Connection	G1/4							
Nominal size	9 mm							
Flow rate	1580 NI/min (1.606 Cv)							
Pressure range	1,5 ... 10 bar ²⁾ (22 ... 145 psi)		2,5 ... 10 bar ²⁾ (36 ... 145 psi)		1,5 ... 10 bar ²⁾	0 ... 10 bar ²⁾ (0 ... 145 psi)		
Control pressure	Control pressure is identical to main pressure range					2,5 ... 10 bar ²⁾ (36 ... 145 psi)		1,5 ... 10 bar ²⁾ (22 ... 145 psi)
Response time at 6 bar	on 15 ms off 19 ms				14 ms	on 15 ms off 22 ms		14 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	0,375 kg (0.827 lb.)		0,380 kg (0.838 lb.)		0,520 kg (1.146 lbs.)	0,450 kg (0.992 lb.)	0,578 kg (1.274 lbs.)	

5/2- and 5/3-way valves

²⁾ Manual override (HN) is on the side of ports 2 and 4 by default. It can be easily repositioned by 180° (side of ports 1, 3 and 5).



Order number Please complete according to order code.	M-07-510-HN	M-07-511-HN	M-07-520-HN	M-07-530-HN	M-07-533-HN	M-07-534-HN	ME-07-511-HN	ME-07-520-HN	
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 exhausted	5/3-way center position pressurized	5/2-way single solenoid ext. pilot supply	5/2-way double solenoid ext. pilot supply	
Connection	G1/4								
Nominal size	9 mm								
Flow rate	1580 NI/min (1.606 Cv)			1300 NI/min (1.321 Cv)			1580 NI/min (1.606 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)		0 ... 10 bar ²⁾ (0 ... 145 psi)			
Control pressure	Control pressure is identical to main pressure range						2,5 ... 10 bar ²⁾ (36 ... 145 psi)		2 ... 10 bar ²⁾ (29 ... 145 psi)
Response time at 6 bar	on 15 ms off 19 ms	on 15 ms off 22 ms	14 ms	on 15 ms off 22 ms		on 15 ms off 19 ms		14 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	0,455 kg (1.003 lbs.)	0,465 kg (1.025 lbs.)	0,620 kg (1.367 lbs.)			0,530 kg (1.168 lbs.)		0,650 kg (1.433 lbs.)	

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

Electrically operated valves

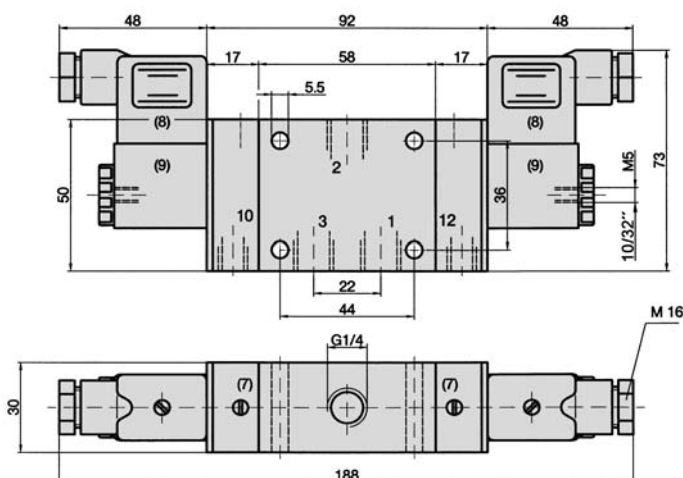
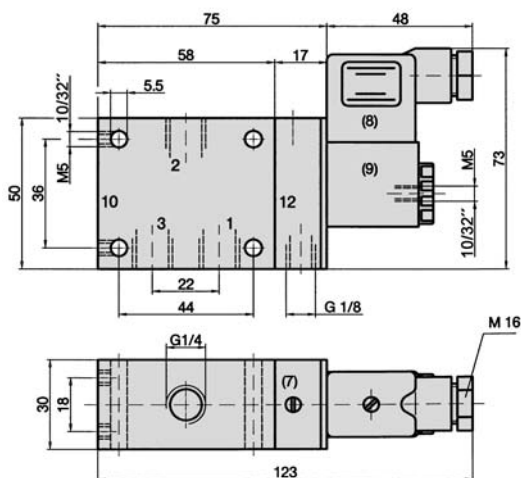
Series M-07, 3/2-, 5/2- and 5/3-way

G1/4 • 1300 and 1580 NI/min (1.321 and 1.606 Cv)



M-07-310-HN, MO-07-310-HN, M-07-311-HN, MO-07-311-HN, ME-07-311-HN, ME-07-312-HN

M-07-320-HN, ME-07-320-HN



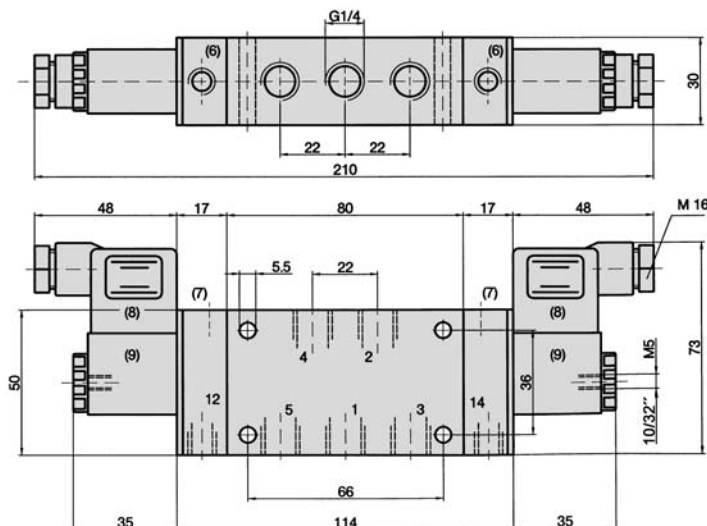
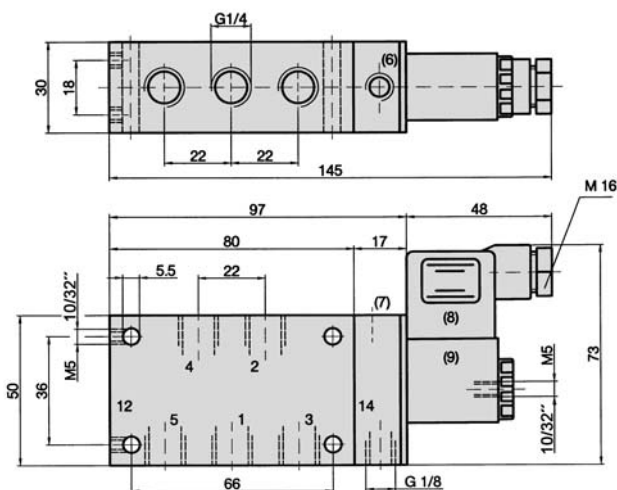
- 1 = pressure inlet
 - 2 = outlets
 - 3 = exhausts
 - (7) = manual override (detent) can be repositioned by 180°
 - (8) = plug socket can be repositioned by 180°
 - (9) = solenoid coil can be repositioned by 4 x 90°
- Valves MO-07-310-HN and MO-07-311-HN carry the solenoid on the opposite side (at pilot 10).
Only valve ME-07-311-HN includes G1/8 at port 12 for external pilot supply.

- 1 = pressure inlet
 - 2 = outlets
 - 3 = 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°
- Only valve ME-07-320-HN includes G1/8 at ports 10 and 12 for external pilot supply.

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

M-07-510-HN, M-07-511-HN, ME-07-511-HN

M-07-520-HN, ME-07-520-HN, M-07-530-HN, M-07-533-HN, M-07-534-HN



- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- (6) = Only valve ME-07-511-HN includes G1/8 at port 14 for external pilot supply.
- (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°

- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- (6) = Only valve ME-07-520-HN includes G1/8 at ports 12 and 14 for external pilot supply.
- (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°

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-011-5-012	Coil with M12 plug connection, 4,8 W, LED and circuit protection	page 4.282
	23-SP-012-5-032	Coil with M12 plug connection, 2,5 W, LED and circuit protection	page 4.282
	Explosion proof	Valves with explosion proof actuator see chapter 13	
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.

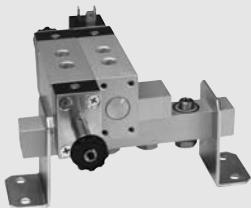
For outdoor applications or in areas with high humidity use coil 23-SP-011-1-... or 23-SP-012-1-... (see page 4.280).

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.

P-manifolds for M-07 and P-07



P-manifold will be delivered completely assembled with valves if requested.



P-manifold with hollow bolts and O-rings.
Available number of stations: see table on page 4.154
R-141/n



Hollow bolt without O-ring
H-143

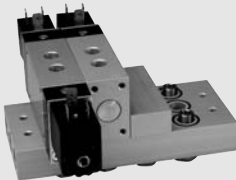


Blind plate for blank station
R-141-V
page 4.154



Brackets (pair)
R-141-W
page 4.154

P-R-S manifolds for M-07 and P-07



P-R-S-manifold will be delivered completely assembled with valves if requested.



P-R-S-manifold with hollow bolts and O-rings.
Available number of stations: see table on page 4.154
R-143/n



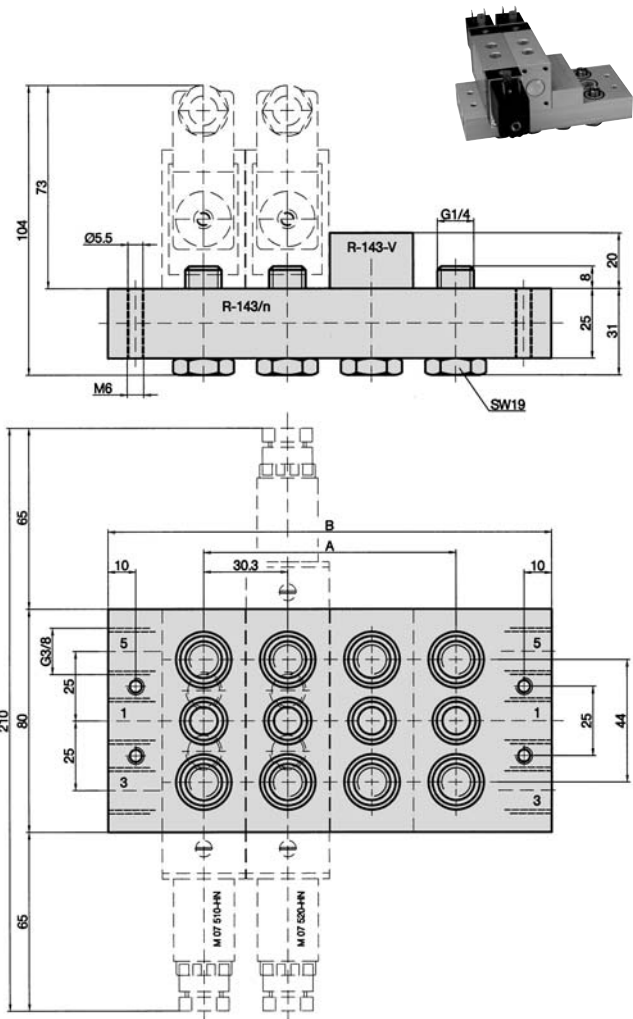
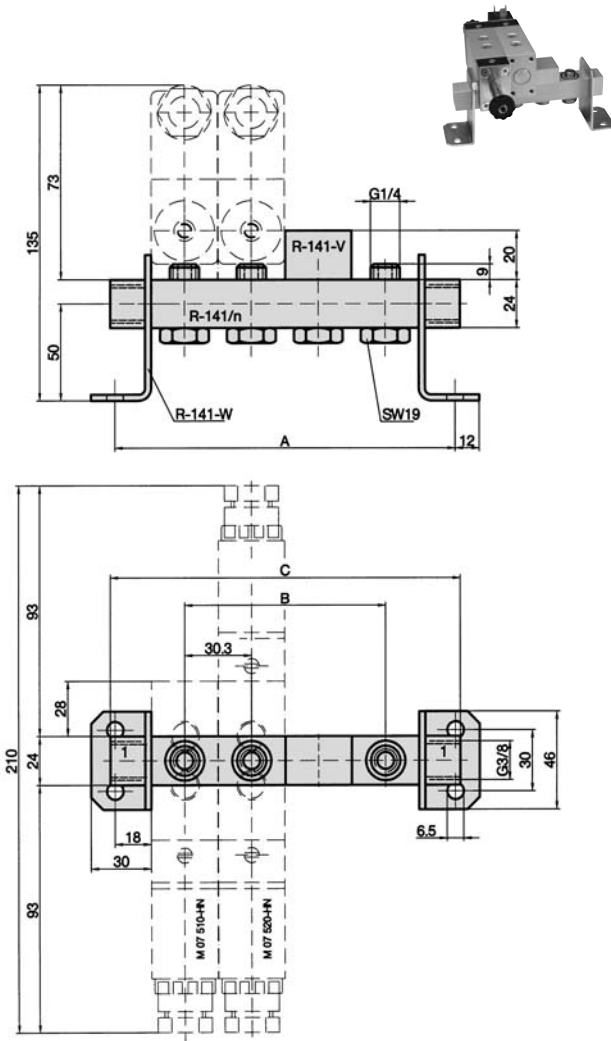
Hollow bolt without O-ring
H-143



Blind plate for blank station
R-143-V
page 4.154

Dimensions for P-manifold R-141

Dimensions for P-R-S-manifold R-143



1 = pressure inlet

1 = pressure inlet
 3, 5 = exhausts

R-141-V

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

R-143-V

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

R-141-W

One pair of mounting brackets for P-Manifold R-141.
 Material: steel zinc plated.

R-143/n

P-R-S-manifold with hollow bolts and O-rings. Suitable for all 5/2- and 5/3-way valves of series M-07 and P-07.
 Material: Al (anodized), O-rings: NBR, hollow bolts: brass.

R-141/n

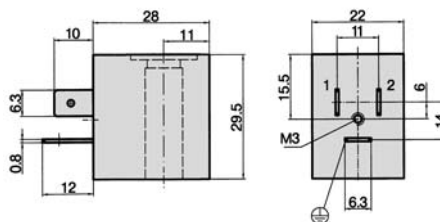
P-manifold with hollow bolts and O-rings. Within the brackets the manifold can be repositioned by 4 x 90°. Suitable for all valves of series M-07 and P-07.
 Material: Al (anodized), O-rings: NBR, hollow bolts: brass.

Order number	A	B	C	Weight
R-141/2	96.6	30.3	100	0.165 kg (0.364 lb.)
R-141/3	126.9	60.6	130	0.227 kg (0.500 lb.)
R-141/4	157.2	90.9	160	0.287 kg (0.633 lb.)
R-141/5	187.5	121.2	190	0.349 kg (0.769 lb.)
R-141/6	217.8	151.5	220	0.412 kg (0.908 lb.)
R-141/7	248.1	181.8	250	0.473 kg (1.043 lbs.)
R-141/8	278.4	212.1	280	0.532 kg (1.173 lbs.)
R-141/12	399.6	333.3	400	0.781 kg (1.722 lbs.)

Order number	A	B	Weight
R-143/4	90.9	160	0.841 kg (1.854 lbs.)
R-143/6	151.5	220	1.211 kg (2.670 lbs.)
R-143/12	333.3	400	2.240 kg (4.938 lbs.)

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.

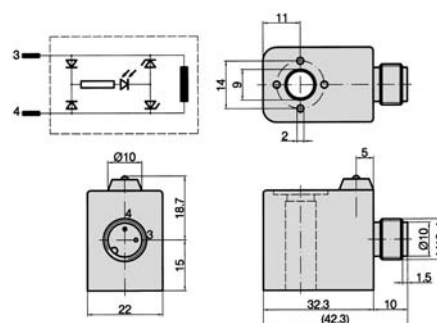
Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape B

(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.



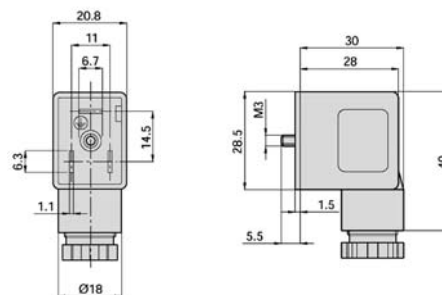
Order number	23-SP-011-5-O12	23-SP-012-5-O32
Standard voltage	24 V DC	24 V DC
Power consumption	4.8 W	2.5 W
Degree of protection	IP 65 according to EN 60529 with connected cable	
Duty cycle	100 %	
Temperature range	- 20 °C ... + 50 °C	
Voltage tolerance	± 10 %	

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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