

Electrically operated valves

3/2-way, G 1/4,

1580 NI/min (1.606 Cv)



Valve & Flow Control Technology

Technical data for series

M-07



Available in NPT
see page 1.010 for
order code.

Order code

M-07-310-HN-142

Coil options¹⁾

Series and function	Standard coils ³⁾ (with plug socket 28-ST-01)		Without coil and plug socket	
	HN at port 2	HN at port 1 + 3	HN at port 2	HN at port 1 + 3
141	12 V DC, 4.2 W	111	570 Power consumpt. 4.2 W, 7/4 VA	500
142	24 V DC, 4.2 W	112	560 Power consumption 2.2 W ²⁾	530
152	24 V AC, 7/4 VA	122	Coil with M12 connector and LED	
156	115 V AC, 7/4 VA	126	HN at port 2	HN at port 1 + 3
157	230 V AC, 7/4 VA	127	O42 24 V DC, 4.8 W	O12
161	12 V DC, 2.2 W ²⁾	131	O62 24 V DC, 2.5 W ²⁾	O32
162	24 V DC, 2.2 W ²⁾	132		

¹⁾ HN = Manual override. It can be repositioned by 180°. Standard valve is supplied with HN on the same side as port 2.

³⁾ When the valve is requested without the plug socket, the first digit of the order code for standard coils must be changed from 1 to 4. If optional plug sockets are required they may be ordered separately.

Further plug sockets see page 4.144.

Design and function

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

The valve M-07-311-HN is available for use with vacuum, order number ME-07-312-HN.

Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

Order number	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
Please complete according to order code.							
Function	3/2-way normally closed air spring return	3/2-way normally open air spring return	3/2-way normally closed spring return	3/2-way normally open spring return	3/2-way double solenoid	3/2-way ext. pilot supply spring return	3/2-way double solenoid ext. pilot supply
Connection	G 1/4						
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⁾ (22 ... 145 psi)		
Control pressure	Control pressure is identical to main pressure range					2.5 ... 10 bar ²⁾ (36 ... 145 psi)	
Response time at 6 bar	on 15 ms off 19 ms				14 ms		on 15 ms off 22 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						
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.)

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

Electrically operated valves

5/2- and 5/3-way, G 1/4, 1580 NI/min (1.606 Cv)



Technical data for series

M-07



Available in NPT
see page 1.010 for
order code.

Order code

M-07-510-HN-142

Coil options¹⁾

Series
and
function

Standard coils³⁾

(with plug socket 28-ST-01)

HN at ports 2 + 4	HN at ports 1, 3 + 5
141 12 V DC, 4.2 W	111
142 24 V DC, 4.2 W	112
152 24 V AC, 7/4 VA	122
156 115 V AC, 7/4 VA	126
157 230 V AC, 7/4 VA	127
161 12 V DC, 2.2 W ²⁾	131
162 24 V DC, 2.2 W ²⁾	132

Without coil and plug socket

HN at ports 2 + 4	HN at ports 1, 3 + 5
570 Power consumpt. 4.2 W, 7/4 VA	500
560 Power consumption 2.2 W ²⁾	530

Coil with M12 connector and LED

HN at ports 2 + 4	HN at ports 1, 3 + 5
O42 24 V DC, 4.8 W	O12
O62 24 V DC, 2.5 W ²⁾	O32

¹⁾ HN = Manual override. It can be repositioned by 180°. Standard valve is supplied with HN on the same side as port 2.

³⁾ When the valve is requested without the plug socket, the first digit of the order code for standard coils must be changed from 1 to 4. If optional plug sockets are required they may be ordered separately.

Further plug sockets see page 4.144.

Design and function

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

Valves ME-07-511-HN and ME-07-520-HN are available for use with vacuum (- 0.95 ... 10 bar/-14 ... 175 psi).

Order number changes to ME-07-511-HN-Q and ME-07-520-HN-Q.

Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 12 of this catalogue.

Order number	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
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 exhausted	5/3-way center position pressurized	5/2-way single solenoid ext. pilot supply	5/2-way double solenoid ext. pilot supply
Connection	G 1/4							
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							
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
3/2-way, G 1/4,
1580 NI/min (1.606 Cv)



Dimensions for series

M-07

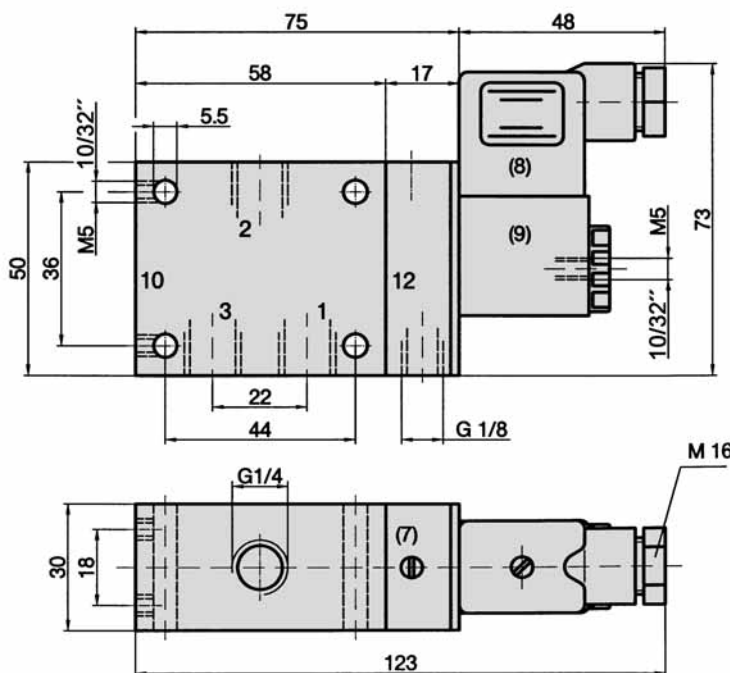
M-07-310-HN, MO-07-310-HN, M-07-311-HN, MO-07-311-HN, ME-07-311-HN, ME-07-312-HN

- 1 = pressure inlet
- 2 = outlet
- 3 = exhaust

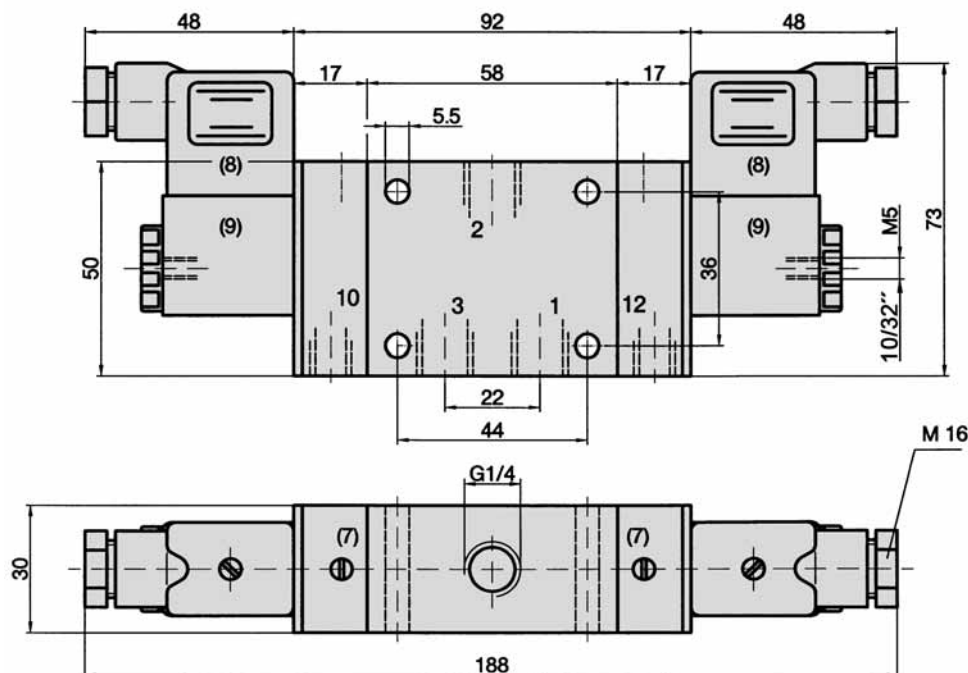
- (7) = manual override (detent) can be repositioned by 180°
- (8) = plug socket can be repositioned by 180°
- (9) = solenoid coil can be repositioned by 4 x 90°

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 G 1/8 at port 12 for external pilot supply.



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



- 1 = pressure inlet
- 2 = outlet
- 3 = exhaust
- (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 G 1/8 at ports 10 and 12 for external pilot supply.

Electrically operated valves
5/2- and 5/3-way, G 1/4,
1580 NI/min (1.606 Cv)

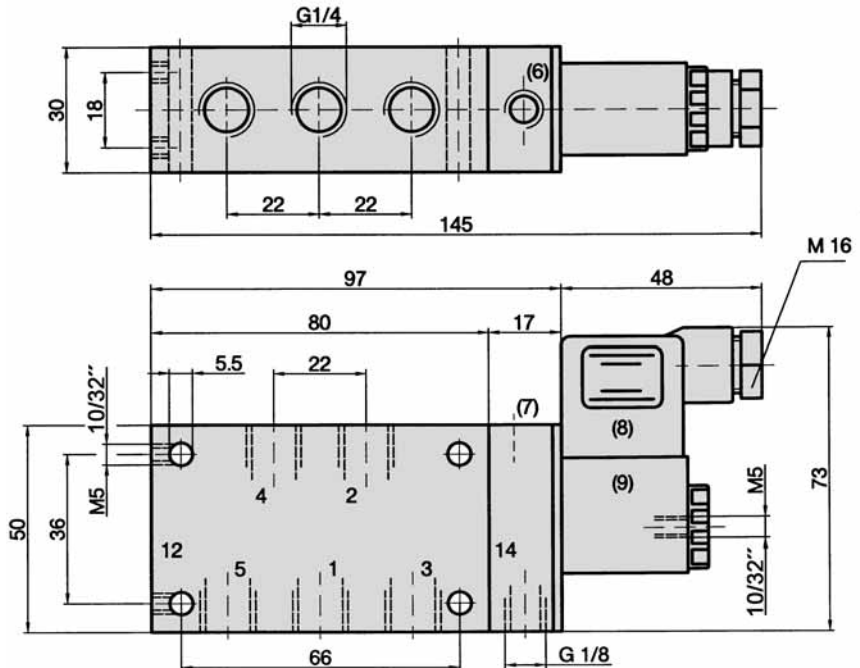


Dimensions for series

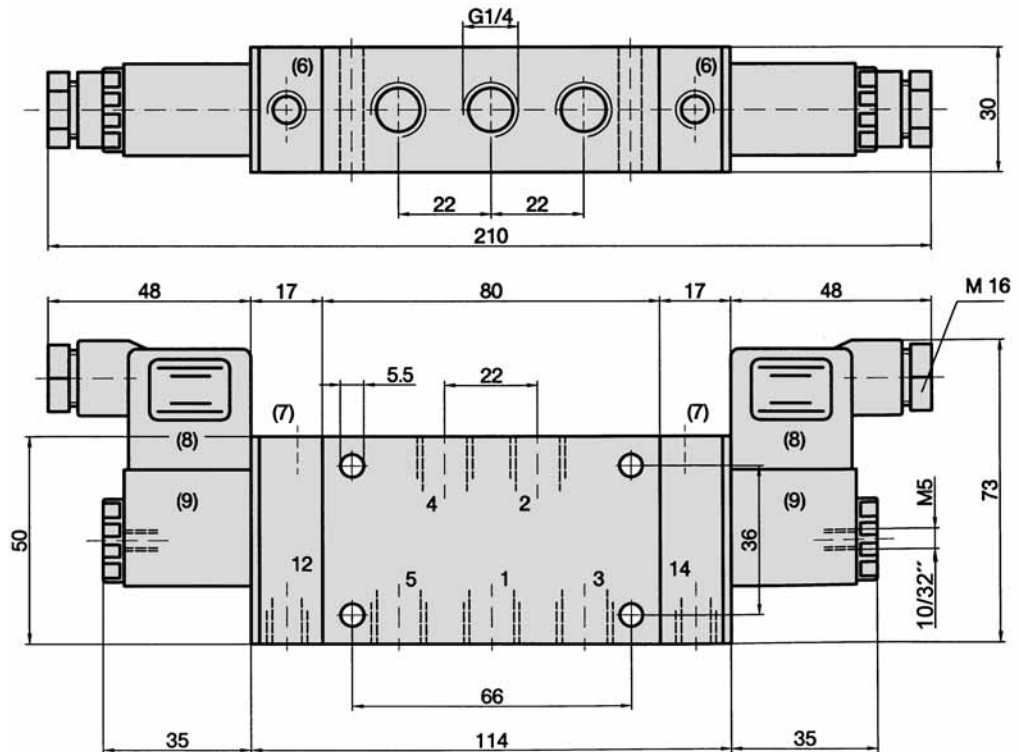
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M-07-510-HN, M-07-511-HN, ME-07-511-HN, ME-07-511-HN-Q

- 1 = pressure inlet
- 2, 4 = outlet
- 3, 5 = exhaust
- (6) = Only valve ME-07-511-HN includes G 1/8 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°



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



- 1 = pressure inlet
- 2, 4 = outlet
- 3, 5 = exhaust
- (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°

(6) = Only valve ME-07-520-HN includes G 1/8 at ports 12 and 14 for external pilot supply.

Electrically operated valves 3/2-, 5/2- and 5/3-way, G 1/4, 1580 NI/min (1.606 Cv)



Accessories for series

M-07

Solenoid coils, actuators



Standard coil
23-SP-011-...
page 4.280



Coil with 2.2 W
power consumption
23-SP-012-...
page 4.280



Coil with M-12 plug
connection, 4.8 W, LED
and circuit protection
23-SP-011-5-O12
page 4.280



Coil with M-12 plug
connection, 2.5 W, LED
and circuit protection
23-SP-012-5-O32
page 4.280



Valves with explosion
proof actuator see
chapter 12.



Standard actuator
23-R-011



Low power actuator
23-R-012

Plug sockets



Standard plug socket
28-ST-01
page 4.281



Plug socket with LED
28-ST-04-...
page 4.281



Plug socket with LED
and circuit protection
28-ST-06-...
page 4.281



Plug socket with LED,
circuit protection and cable
28-ST-06-K3-...
page 4.281

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.

When using explosion proof coils the dimensions of the corresponding valve change.

For outdoor applications or in areas with high humidity use coil 23-SP-011-1-... or 23-SP-012-1-... (see page 5.120).

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.