

# 15 mm MICROSOL Direct acting solenoid valve

- 2/2, 3/2;  
Manifold mounting
- Compact design
- High flow rate
- In excess of 100 – Mio.  
cycle rate
- Up to 3,6 mm orifice



## Technical features

### Medium:

Air, oxygen, neutral gases (10% to 95% humidity, non condensing), 40 µm filtered

### Operation:

Direct acting 2-way and 3-way valves, normally closed and normally opened

### Operating pressure:

see table below page 2

### Flow:

6 ... 120 l/min at 2 bar (29 psi) at +20°C (+68°F)

### kv factor:

0,15 ... 3 (Cv: 0,01 ... 0,2)

### Mounting:

Manifold

### Orifice:

2/2 way valves  
0,5 ... 3,6 mm (0,02 ... 0,14")  
3/2 way valves  
0,5 ... 1,5 mm (0,02 ... 0,06")

### Response time:

10 ... 15 ms  
Response time measured according to ISO 12238

### Life expectancy:

≥100 million cycles (except Hit & Hold valves)

### Weight:

30 g (0,07 lbs)

### Ambient/media temperature:

-10 ... +50°C (+14 ... +122°F)  
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

### Materials:

Body: PPS, PA  
Seat seals: NBR, FPM  
Internal parts: Stainless steel, PAA

## Electrical details

Voltage	24 V d.c.
Voltage range	-10% ... +15% @ 100% duty cycle
Electrical insulation	1500 V a.c.
Insulation class	F (155°C)
Protection class according to EN 60529	IP51 with connector

## Following options on request

Pneumatic configuration (latching)
Operating pressure (also vacuum)
Materials
Voltage
Pneumatic port allocation
Power consumption
Electrical connections (300 mm flying leads, connector types)
Coil orientation
Protection class

## Embedded electronics options

Integrated pulse width modulation (PWM)
Reverse polarity protection
Led signalization

## Technical data – standard models

Symbol	Operation	Orifice	Operating pressure		kv *1)	Voltage *3)	Power consumption	Seal Material	Drawing No.	Model
			(bar)	(psi)						
	2/2 NC (Flow direction from 1 » 2)	0,5	0 ... 15	0 ... 218	0,15	24	1	NBR	1	01-211P200-H0+13111+AYV
		0,8	0 ... 10	0 ... 145	0,4	24	1	NBR	1	01-211P201-H0+13111+AYV
		1,2	0 ... 10	0 ... 145	0,75	24	2	NBR	1	01-211P202-H0+63111+AYZ
		1,6	0 ... 6	0 ... 87	1,15	24	2	NBR	1	01-211P203-H0+63111+AYZ
		2	0 ... 4	0 ... 58	1,3	24	2	NBR	1	01-211P204-H0+63111+AYZ
	2/2 NC (Flow direction from 2 » 1)	3,6	0 ... 6	0 ... 87	3	24	12/0,5 *2)	NBR	2	01-211P-036H0+63111+AZN
	2/2 NO ECI *4)	0,5	0 ... 16	0 ... 232	0,15	24	2	NBR	1	01-221P200-H0+631A1+AYZ
		1,2	0 ... 10	0 ... 145	0,75	24	2	NBR	1	01-221P202-H0+631A1+AYZ
		2	0 ... 6	0 ... 145	1,4	24	2	NBR	1	01-221P204-H0+631A1+AYZ
	3/2 NC	0,8	0 ... 8	0 ... 116	0,28	24	1	NBR	3	01-311P101-H0+13111+AYV
		1,1	0 ... 10	0 ... 145	0,42	24	2	NBR	3	01-311P1011H0+63111+AYZ
		1,5	0 ... 6	0 ... 87	0,55	24	2	NBR	3	01-311P1015H0+63111+AYZ
	3/2 NO ECI *4)	0,8	0 ... 10	0 ... 145	0,28	24	2	NBR	3	01-321P101-H0+631A1+AYZ
		1,1	0 ... 6	0 ... 87	0,42	24	2	NBR	3	01-321P1011H0+631A1+AYZ
		1,5	0 ... 3	0 ... 102	0,55	24	2	NBR	3	01-321P1015H0+631A1+AYZ
	3/2 UNI	0,7	0 ... 6	0 ... 87	0,24	24	2	NBR	3	01-331P1070H0+63111+AYZ
		1	0 ... 3,5	0 ... 50	0,36	24	2	NBR	3	01-331P1010H0+63111+AYZ
		1,5	0 ... 2	0 ... 29	0,55	24	2	NBR	3	01-331P1015H0+63111+AYZ

\*1) Cv - Value in [gal/min] = kv x 0,07; kv for 3/2 Uni valves represents flow value between ports 2 & 3; kv for 3/2 NC & 3/2 ECI valves represents flow value between ports 1 & 2

\*2) Valve equipped with 'Hit & Hold' power saving electronic

\*3) Valve models available with different nominal voltages

\*4) ECI - Push type version

## Accessories

Mounting plate with M5 thread – 1 position for 2 ways valve up to 2 mm orifice and 3 ways valve



Page 4

S050.1010

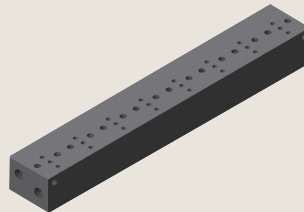
Mounting plate with G1/8 thread – 1 position for 2 ways 3,6 mm orifice



Page 4

S010.2248

M5 ported mounting plate – 2 ... 8 positions



Available on request

## Electrical connection

Electrical connector MPM 9,4 mm industry standard (C192) to mate AMP spade 2,8 x 0,5 mm



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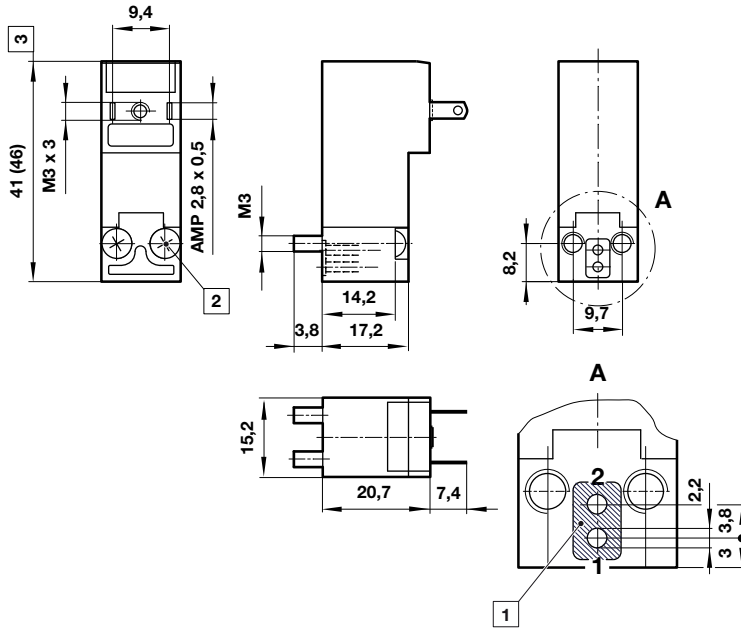
N050.1456

Dimensions

Dimensions in mm  
Projection/first angle



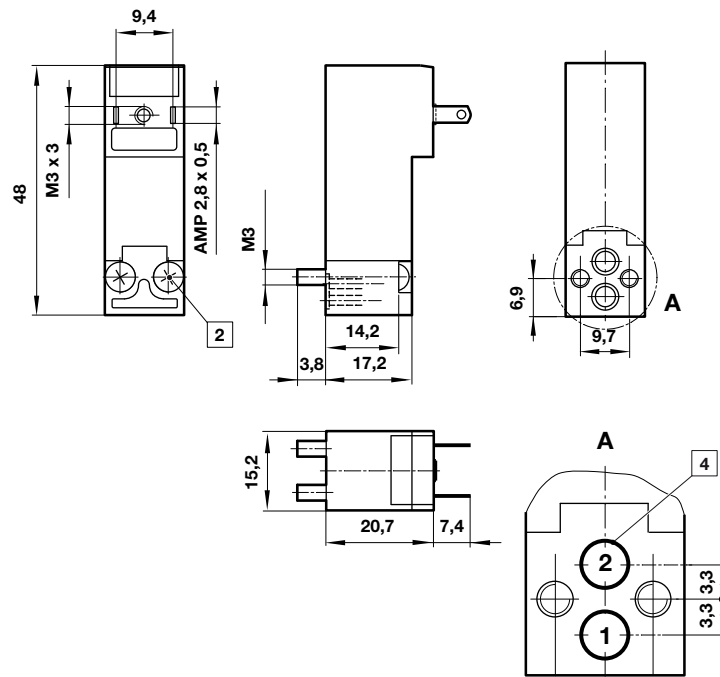
① 2 ways standard



- ① Sealing area
- ② The recommended mounting screw tightening torque is  $0,6 \pm 0,1$  Nm.
- ③ Value in ( ) for ECI version

All solenoids are supplied with mounting screws and gasket.

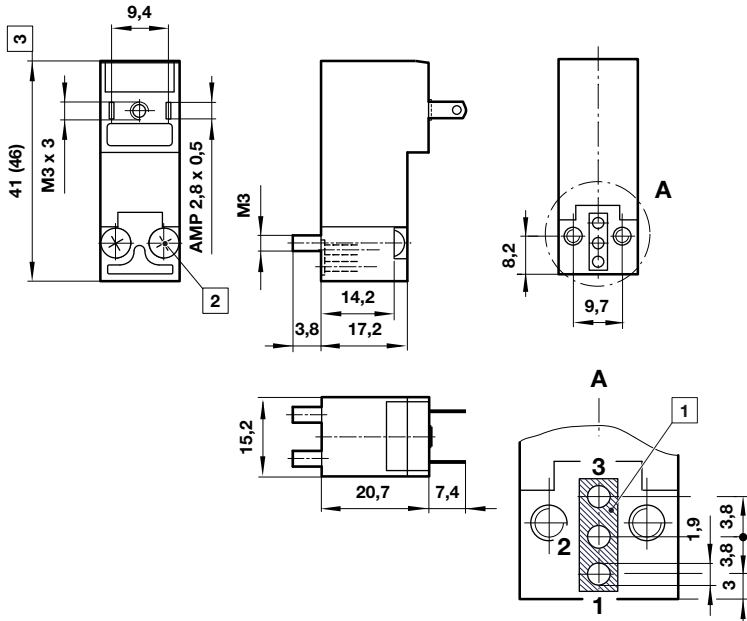
② 2 ways 3,6 mm orifice



## Dimensions

③ 3 ways standard

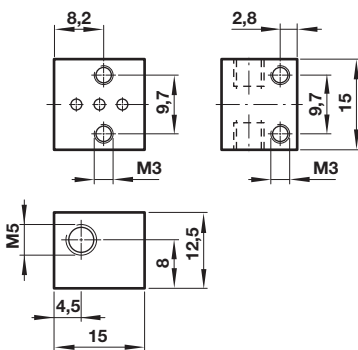
Dimensions in mm  
Projection/first angle



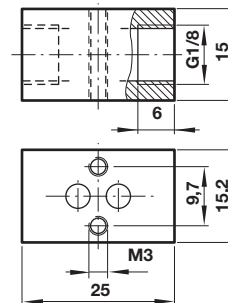
- ① Sealing area
- ② The recommended mounting screw tightening torque is  $0,6 \pm 0,1$  Nm.
- ③ Value in ( ) for ECI version
- ④ 'O' Rings  $\varnothing 4 \times 1$

All solenoids are supplied with mounting screws and gasket or 'O' Rings.

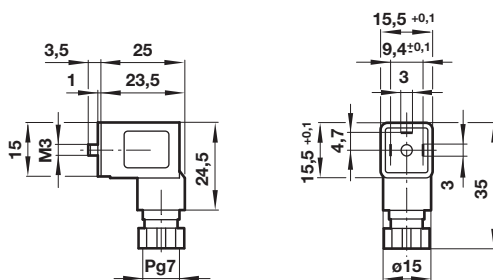
Mounting plate  
Model: S050.1010  
(Aluminium)



Mounting plate  
Model: S010.2248  
(Aluminium)



Electrical connector  
Model: N050.1456



## Warning

These products are intended for use in air, oxygen and neutral gas systems only. Do not use these products where pressures and temperatures can exceed those listed under »**Technical features**«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult IMI Plc., FAS MEDIC SA.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.