

Science

IMI FAS

22 mm MINISOL Direct acting solenoid valve

- -2/2.3/2
- Compact design
- Long life in excess of 25 Mio. cycles
- High cycle rate of up to 2000 cycles per minute
- Up to 2,4 mm orifice (ky 2.00)



Technical features

Medium:

Air, neutral gases and liquids

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

Operating pressure:

0 ... 40 bar (0 ... 580 psi)

maximum

Flow (kv factor):

0,5 ... 2,0 (Cv: 0,03 ... 0,14)

Mounting: Inline

1,0 2,4 mm (0,04 ... 0,09")

Port size: G1/8

Response time:

8 ... 15 ms

Response time measured according to ISO 12238

Life time:

25 million cycles

Temperature: Ambient:

-15 ... +50°C (+5 ... +122°F)

Media:

-15 ... +130°C (+5 ... +266°F)

Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F). Materials:

Body: Stainless steel, brass Seal: NBR, FPM, EDPM

Electrical details

| Voltage tolerances | -10% +15% |
|--|---|
| Duty cycle | 100% E.D. |
| Insulation class | F (155°C) |
| Protection class according to EN 60529 | IP65 with connector |
| Electrical connection | Interface according to DIN EN 175301-803, Form B |
| Coil orientation | Rotable 360° |
| Coil mounting | M8 x 0,75 mm nut |
| | |

Following options on request

| Alternative configuration for manifold mounting |
|---|
| Pneumatic connection |
| Voltage |
| Power consumption |
| Operating pressure (also vacuum) |
| Materials |
| Electrical connections (type of connector & coil orientation) |
| Coil |

File code: LS_DS_MINISOL_en/05/24



Technical data – standard models, G1/8

| Symbol | Function | Orifice | Operating pressure | kv *1) | Voltage | Power consumption | Material | | Model |
|----------------------|----------|---------|---------------------------|---------|----------|-------------------|----------|------|---------------------------|
| | | (mm) | (bar) | (l/min) | (V d.c.) | (W) | Body | Seal | |
| | 2/2 NC | 1,0 | 0 40 | 0,50 | 24 | 3,8 | Brass | NBR | 09-211-101020+AQF |
| | 2/2 NC | 1,2 | 0 25 | 0,65 | 24 | 3,8 | Brass | NBR | 09-211-102-20+AQF |
| 12 210 | 2/2 NC | 1,6 | 0 11 | 1,20 | 24 | 3,8 | Brass | NBR | 09-211-103-20+AQF |
| <u> </u> | 2/2 NC | 2,0 | 0 8 | 1,60 | 24 | 3,8 | Brass | NBR | 09-211-104-20+AQF |
| 1 | 2/2 NC | 2,4 | 0 6 | 2,00 | 24 | 3,8 | Brass | NBR | 09-211-105-20+AQF |
| | 2/2 NC | 2,4 | 760 10 ⁻³ TORR | 2,00 | 24 | 3,8 | Brass | NBR | 09-211-105-20 ELC VME+AQF |
| 12 2 10 | 3/2 NC | 1,0 | 0 10 | 0,5 | 24 | 3,8 | Brass | NBR | 09-311-101020+AQF |
| | 3/2 NC | 1,2 | 0 7 | 0,65 | 24 | 3,8 | Brass | NBR | 09-311-102-20+AQF |
| 1 3 | 3/2 NC | 1,6 | 0 5 | 1 | 24 | 3,8 | Brass | NBR | 09-311-103-20+AQF |
| 12 10 3 | 3/2 NO | 1,6 | 0 5 | 0,7 | 24 | 3,8 | Brass | NBR | 09-321-103-20+AQF |
| | | | | | | | | | |
| | | | | | | | | | |

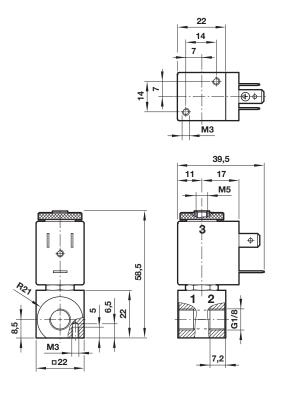
^{*1)} Cv - Value in [gal/min] = kv x 0,07

Accessories



Dimensions

Dimensions in mm Projection/first angle



Port identification

| | Ports 1 | 2 | 3 |
|--------|------------|---|---|
| 2/2 NC | Α | Р | - |
| 3/2 NC | Р | Α | R |
| 3/2 NO | R | Α | Р |

 $\label{eq:power_power} P = Inlet; \ A = Outlet; \ R = Exhaust \\ Please refer to marking on the valve body for flow direction or port identification.$

All solenoids are supplied with mounting screws and gasket.

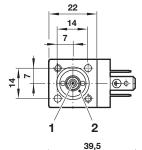


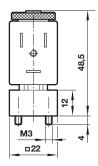
MINISOL 2/2 NC, 3/2 NC or 3/2 NO for manifold mounting on request

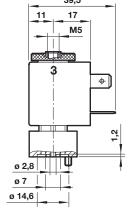
Dimensions in mm Projection/first angle

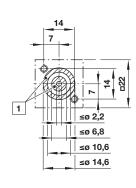












Port identification

| | Ports 1 | 2 | 3 | |
|--------|------------|---|---|--|
| 2/2 NC | Α | Р | - | |
| 3/2 NC | Р | Α | R | |
| 3/2 NO | R | Α | Р | |

 $P = Inlet; A = Outlet; R = Exhaust \\ Please refer to marking on the valve body for flow direction or port identification. \\$

1 Sealing area

All solenoids are supplied with mounting screws and gasket.

Warning

These products are intended for use in air, neutral gas and liquid 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 Precision Engineering, Fluid Automation Systems s.a.

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.