

Solenoid valve(5/2 way)

4M(NAMUR) Series



Symbol



Product feature

1. Internally piloted structure.
2. Structure in sliding column mode: good tightness and sensitive reaction.
3. Double control solenoid valves have memory function.
4. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
5. No need to add oil for lubrication.
6. Install in the side plate with the surface upward, which can be used by directly connecting with the actuators.
7. Affiliated manual devices are equipped to facilitate installation and debugging.
8. Several standard voltage grades are optional.

Flow chart

Please refer to the same types of 4V series solenoid valves.

Specification

| Model | 4M110-M5 4M120-M5 | 4M110-06 4M120-06 | 4M210-06 4M220-06 | 4M210-08 4M220-08 | 4M310-08 4M320-08 | 4M310-10 4M320-10 |
|-----------------------------|--|--|---|----------------------|----------------------|----------------------|
| Fluid | Air(to be filtered by 40 μm filter element) | | | | | |
| Acting | Internal pilot | | | | | |
| Port size [Note1] | In=Out=M5 | In=Out=1/8" | In=Out=1/8" | In=1/4" Out=1/8" | In=Out=1/4" | In=3/8" Out=1/4" |
| Orifice size(Cv) [Note4] | 4M110-06,4M120-06: 10.2mm ² (Cv=0.6) | 4M210-08,4M220-08: 17.0mm ² (Cv=1.0) | 4M310-10,4M320-10: 28.0mm ² (Cv=1.65) | | | |
| Valve type | 5 port 2 position | | | | | |
| Operating pressure | 0.15~0.8MPa(21~114psi) | | | | | |
| Proof pressure | 1.2MPa(175psi) | | | | | |
| Temperature | -20~70°C | | | | | |
| Material of body | Aluminum alloy | | | | | |
| Lubrication [Note2] | Not required | | | | | |
| Max.frequency[Note3] | 5 cycle/sec | | | | 4 cycle/sec | |
| Weight (g) | 4M110:120 | 4M120:175 | 4M210:220 | 4M220:320 | 4M310:310 | 4M320:400 |

[Note1] PT thread, G thread and NPT thread are available.

[Note2] Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

[Note3] The maximum actuation frequency is in the no-load state.

[Note4] Equivalent orifice S and Cv are all calculated from the flow rate data.

Coil specification

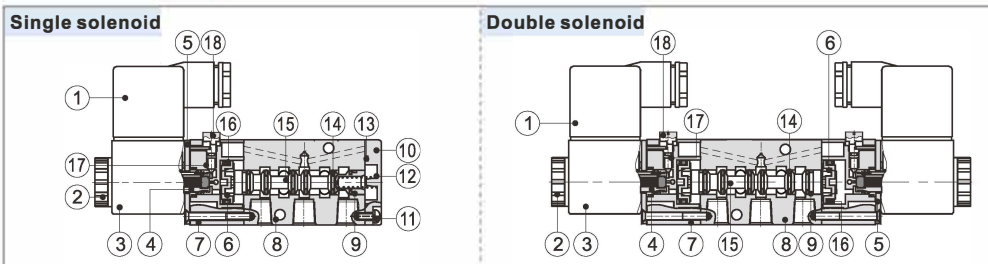
| Item | 4M110 | | 4M120 | | 4M210 | | 4M220 | | 4M310 | | 4M320 | |
|----------------------------|--------------------|--------|-------|-------|----------|--------|--------|-------|-------|-------|-------|--|
| Standard voltage | AC220V | AC110V | AC24V | DC24V | DC12V | AC220V | AC110V | AC24V | DC24V | DC12V | | |
| Scope of voltage | AC: ±15% | | | | DC: ±10% | | | | | | | |
| Power consumption | 3.5VA | 3.5VA | 4.0VA | 2.5W | 2.5W | 4.5VA | 4.5VA | 5.0VA | 3.0W | 3.0W | | |
| Protection | IP65(DIN40050) | | | | | | | | | | | |
| Temperature classification | B Class | | | | | | | | | | | |
| Electrical entry | Terminal, Grommet | | | | | | | | | | | |
| Activating time | 0.05 sec and below | | | | | | | | | | | |

Ordering code

4M 3 10 10 A □ □
① ② ③ ④ ⑤ ⑥ ⑦

| □ Model | □ Code | □ Valve type | □ Port size | □ Voltage | □ Electrical entry | □ Thread type |
|--|---------------|--|--|--|-------------------------------|-----------------------------|
| 4M: Solenoid valve (5/2 way NAMUR type) | 1: 100 Series | 10: Single solenoid 20: Double solenoid | M5: M5 | A: AC220V B: DC24V C: AC110V E: AC24V F: DC12V | Blank: Terminal I: Grommet | No this code |
| | 2: 200 Series | | 06: 1/8" | | | Blank: PT G: G T: NPT |
| | 3: 300 Series | | 06: 1/8" 08: 1/4" 08: 1/4" 10: 3/8" | | | |

Inner structure



| No. | Item | No. | Item |
|-----|-------------|-----|---------------------|
| 1 | Connector | 10 | Bottom cover |
| 2 | Coil net | 11 | Fixed screw |
| 3 | Coil | 12 | Spool spring |
| 4 | Armature | 13 | Bottom cover gasket |
| 5 | Fixed plate | 14 | Spool O-ring |
| 6 | Piston | 15 | Spool |
| 7 | Pilot kit | 16 | Piston O-ring |
| 8 | Body | 17 | Override spring |
| 9 | Wear ring | 18 | Manual override |

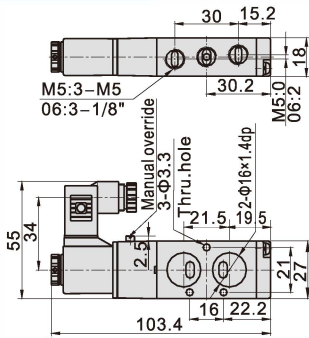
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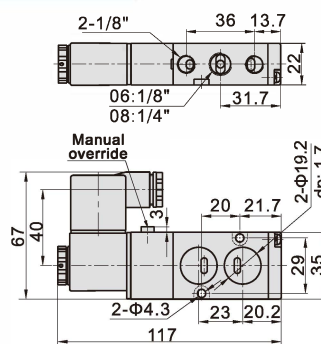


Dimensions

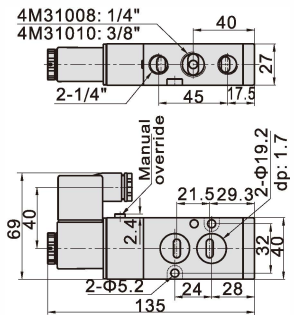
4M110(Terminal)



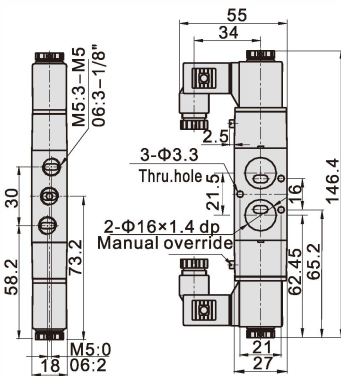
4M210(Terminal)



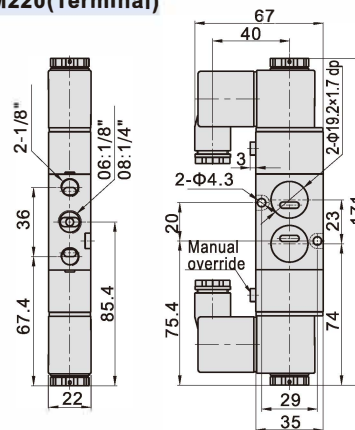
4M310(Terminal)



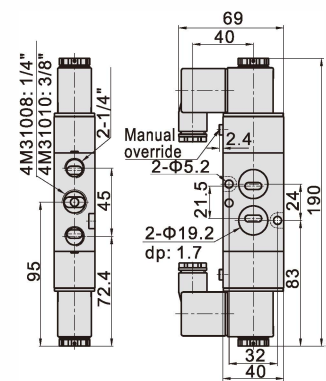
4M120(Terminal)



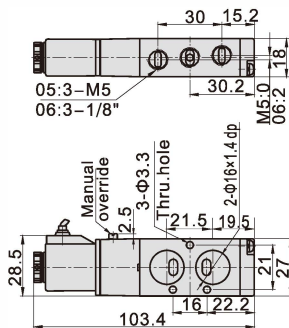
4M220(Terminal)



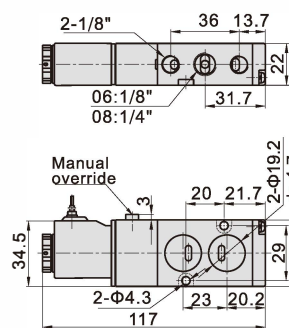
4M320(Terminal)



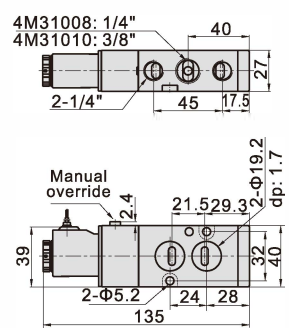
4M110(Grommet)



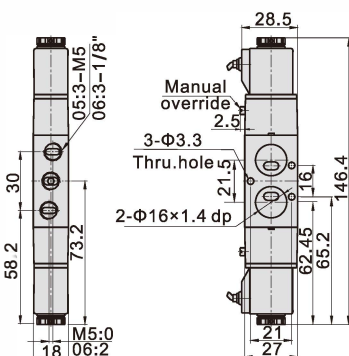
4M210(Grommet)



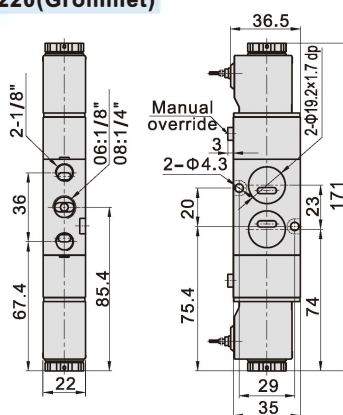
4M310(Grommet)



4M120(Grommet)



4M220(Grommet)



4M320(Grommet)

