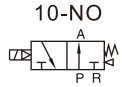
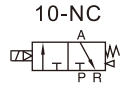
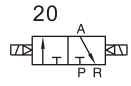
# 3V100 Series




## Ordering code

| 3V | 1 | 10 | 06 | NO | A | □ | T |
|---|---|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |

**①Model**
3V: Solenoid valve (3/2 way)

**②Code**
1: 100 Series

**③Valve type**
10: Single solenoid
20: Double solenoid

**④Port size**
M5: M5
06: 1/8"

**⑤Acting type**
NC: Normally closed
NO: Normally opened

**⑥Standard voltage**
A: AC220V
B: DC24V
C: AC110V
E: AC24V
F: DC12V

**⑦Electrical entry**
Blank: Terminal
I: Flying leads[Note]

[Note]: The wire length is 0.5m.

**⑧Thread type**
T: NPT

Please refer to P51 for manifold specification and the order way.

## Specification

| Model | 3V110-M5 | 3V120-M5 | 3V110-06 | 3V120-06 |
|---|---|---|---|---|
| Fluid | Air(to be filtered by 40μm filter element) | | | |
| Acting | Internal pilot | | | |
| Port size [Note1] | M5 | | 1/8" | |
| Orifice size [Note3] | 3V110-06,3V120-06:10.2mm$^2$(Cv=0.6) | | | |
| Valve type | 3 port 2 position | | | |
| Lubrication [Note2] | Not required | | | |
| Operating pressure | 21~114psi(0.15~0.8MPa) | | | |
| Proof pressure | 175psi(1.2MPa) | | | |
| Temperature | -20~70℃ | | | |
| Material of body | Aluminum alloy | | | |

[Note 1] NPT thread is available.
[Note 2] Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.
[Note 3] Equivalent orifice S and Cv are all calculated from the flow rate data.

## Product feature

1. Structure in sliding column mode: good tightness and sensitive reaction.
2. Double control solenoid valves have memory function.
3. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
4. No need to add oil for lubrication.
5. Affiliated manual devices are equipped to facilitate installation and debugging.
6. Several standard voltage grades are optional.
7. Integrate with the manifold to save installation space.

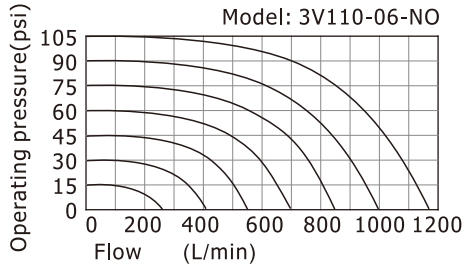
# 3V100 Series

## Coil specification

| Item | Specification | | | | |
|---|---|---|---|---|---|
| Standard voltage | AC220V | AC110V | AC24V | DC24V | DC12V |
| Scope of voltage | AC: ±15% DC: ±10% | | | | |
| Power consumption | 3.5VA | 3.5VA | 4.0VA | 2.8W | 2.5W |
| Protection | IP65(DIN40050) | | | | |
| Temperature classification | B Class | | | | |
| Electrical entry | Terminal, Flying leads | | | | |
| Activating time | 0.05 sec and below | | | | |
| Max. frequency [Note 1] | 5 cycle/sec | | | | |

[Note1] The maximum actuation frequency is in the no-load state.

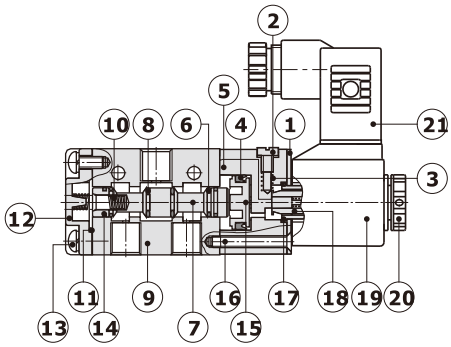
## Flow chart



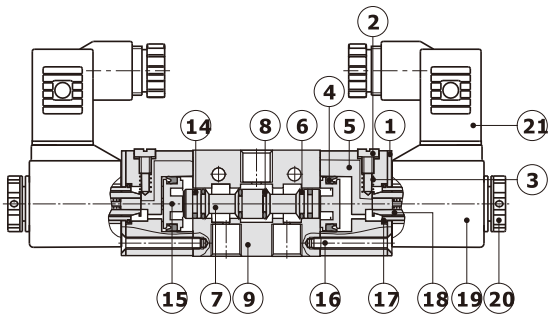

The data in flow rate chart are obtained from AirTAC lab.

## Inner structure

**3V110**




**3V120**

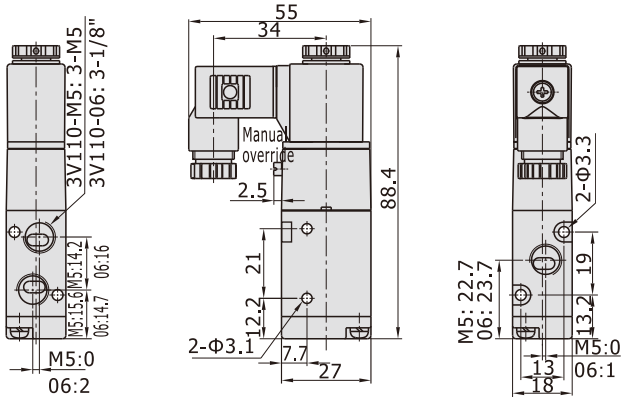



| No. | Item | No. | Item | No. | Item |
|---|---|---|---|---|---|
| 1 | Fixed plate | 8 | O-ring | 15 | Piston |
| 2 | Manual override | 9 | Body | 16 | Pilot screw |
| 3 | Override spring | 10 | Spool spring | 17 | O-ring |
| 4 | Piston O-ring | 11 | Bottom cover gasket | 18 | Armature |
| 5 | Pilot body | 12 | Bottom cover | 19 | Coil |
| 6 | Spool packing | 13 | Screw | 20 | Coil nut |
| 7 | Spool | 14 | Wear ring | 21 | Connector |

# 3V100 Series

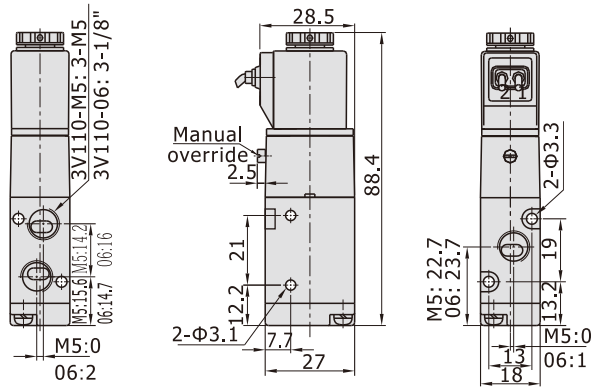
## Dimensions

### 3V110(Terminal)

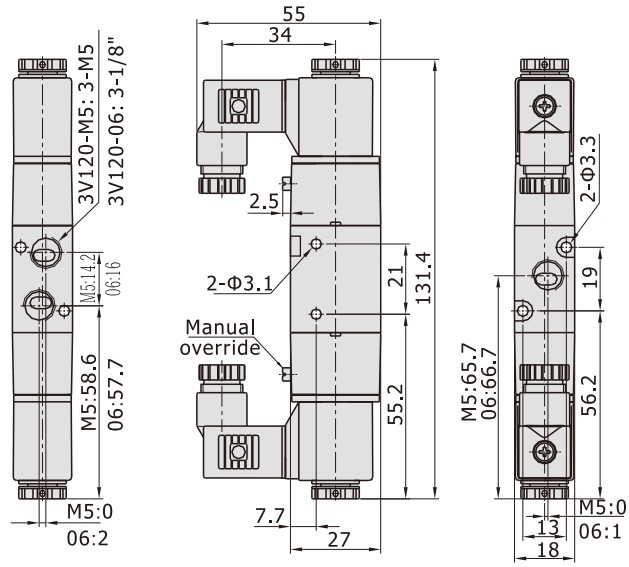



### 3V110(Flying leads)

[Unit: mm]




### 3V120(Terminal)




### 3V120(Flying leads)