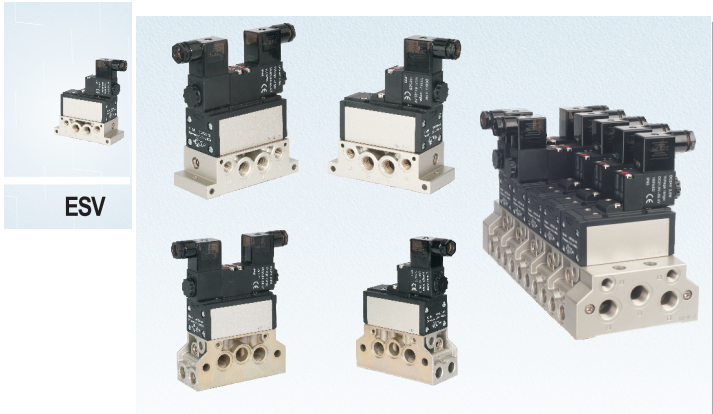


# ISO Standard solenoid valve(5/2, 5/3 way)

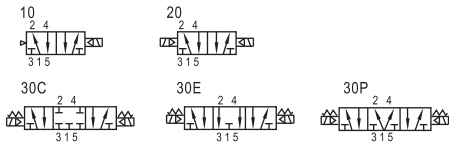


## ESV200, 300, 400, 600 Series



ESV

### Symbol



### Product feature

1. Succinct appearance and compact conformation.
2. The installation size conforms to ISO 5599/1 standard.
3. Because of the special seals, the feature are large flow rate and long lifetime.
4. For 200\300\400 series you can adjust the installation direction of the gasket to change the acting type: internal pilot, external pilot, or air control.
5. You need install the valve together with the sub-base. There are individual and parallel type for manifold sub-base.
6. There are various connection and installation method for manifold. It is easy to use.
7. The manifold of 200\300\400 series have the function of exhaust throttling, so no need to connect another throttle valve.

### Ordering code of valve

**ESV 2 10 A** □ □

- Model**: ESV: ISO standard solenoid valve
- Code**: 2: 200 Series, 3: 300 Series, 4: 400 Series, 6: 600 Series
- Pilot type** ①: Blank: Internal pilot, W: External pilot
- Electrical entry**: Blank: Terminal, I: Grommet
- Voltage**: A: AC220V, B: DC24V, C: AC110V, E: AC24V, F: DC12V
- Valve type**:
  - 10: Single solenoid 5/2 way
  - 20: Double solenoid 5/2 way
  - 30C: Double solenoid 5/2 way closed center
  - 30E: Double solenoid 5/2 way exhaust center
  - 30P: Double solenoid 5/2 way pressure center

① Note: Internal pilot can be changed to external pilot mode(except 600 series), please adjust the installation method of the gasket referring to article 1 o 2 in the installation manual.

### Specification

Item	Specification			
	200Series	300 Series	400 Series	600 Series
Model	200Series	300 Series	400 Series	600 Series
Fluid	Air(to be filtered by 40 μ m filter element)			
Acting	Internal pilot or external pilot			
Lubrication ①	Not required			
Operating Pressure	Internal pilot	0.2~1.0Mpa(29~145psi)		
	External pilot	0~1.0Mpa(0~145psi)		
Control pressure(External pilot)	0.2~1.0Mpa(29~145psi)			
Proof pressure	1.5Mpa(215psi)			
Temperature	-20~70 °C			
Port size(manifold) ②	1/4"	3/8"	1/2"	3/4"
Port size(end plate)	3/8"	1/2"	3/4"	1"
Voltage range	AC: ± 15%		DC: ± 10%	
Power consumption	AC:3.5VA		DC:3.0W	
Activating time (0.5MPa)Open/close	10\20 Series	33\41ms	42\55ms	50\68ms
	30 C\E\P Series	38\50ms	52\62ms	52\68ms
Insulation	Class B			
Protection	IP65			
Installation size	ISO5599-1 standard			

① Note: Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

② Note: PT thread and G thread are available.

### Ordering code of manifold

**ESV 20 1M P** □ □

- Model**: ESV: ISO standard solenoid valve
- Code**: 2: 200 Series, 3: 300 Series, 4: 400 Series, 6: 600 Series
- Manifold type**:
  - 1M: Individual sub-base
  - 2M: Manifold sub-base
  - 3M: End flate kit
  - 4M: Connecting black
- Port position type**:
  - 1M: Blank: Side port, B: Bottom port
  - 2M: Blank: Left side port, R: Right side port, B: Bottom port
  - 4M: Blank: Left side port, R: Right side port
- External pilot port type**:
  - 1M: Blank: Individual pilot port
  - 2M: Blank: Individual pilot port, W: Centralized pilot port
- Thread type**: P: PT, G: G

- Note: 1. For the same model, the port size of the end-plate is bigger than the sub-base (For example ESV202M, the port size of sub-base is 1/4", and the port size of end plate is 3/8").  
 2. Only individual pilot port is available for individual sub-base.  
 3. The manifold sub-base must be used with end plate kit, individual pilot port and centralized pilot port can be mixed.  
 4. 600 series individual sub-base only has side port, 600 series manifold sub-base only has individual pilot port and bottom port.  
 5. Only 600 series have connecting black.

### Ordering code of accessories

**P-ESV200M R2**

- Accessories code**: P: Unit accessories
- Accessories type**: R2: Blank plate for manifold
- Code**:
  - ESV200M: 200 Series manifold
  - ESV300M: 300 Series manifold
  - ESV400M: 400 Series manifold
  - ESV600M: 600 Series manifold



# ISO Standard solenoid valve(5/2, 5/3 way)



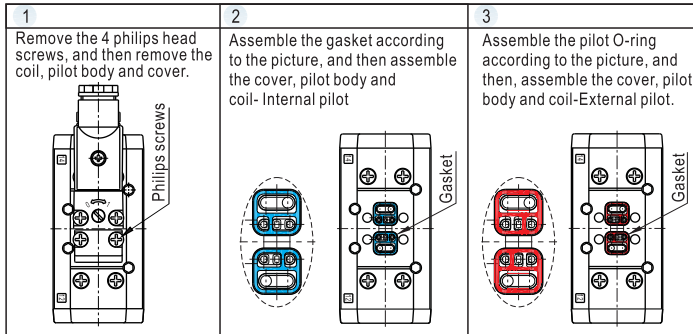
## ESV200, 300, 400, 600 Series

### ■ Installation and operation(For 200, 300, 400 series)

#### 1. The classification and selection for the pilot type of valve

1.1. According to the source of pilot air, we can divide the valve into two types: the internal pilot and external pilot. The standard type is internal pilot.

1.2. You can convert from internal pilot to external pilot by the following methods.



#### 2. The classification and selection for the parallel manifold sub-base

2.1. According to the direction of pilot air supply, we can divide the manifold sub-base into two types: the individual pilot and centralized pilot.

2.2. If you select the individual pilot, the fitting must be connected to the individual pilot ports.

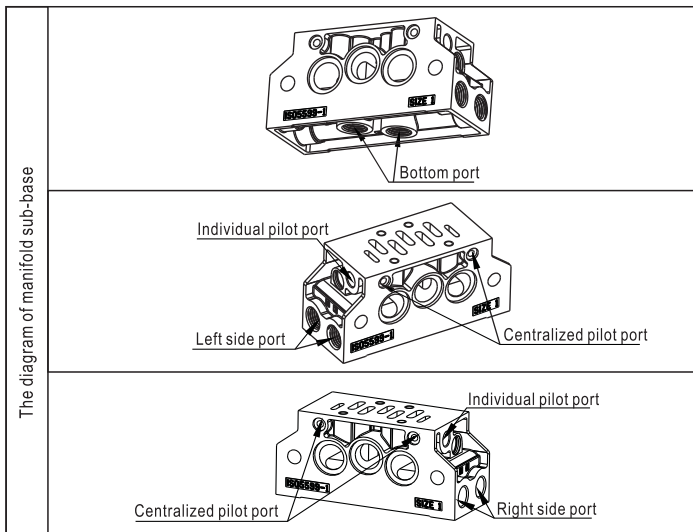
If you select the centralized pilot type, the fitting must be connected to the centralized pilot ports.

2.3. If you use parallel manifold, all of the manifold must be used the same pilot type: such as, all of them are the individual pilot type, or all of them are the centralized pilot type.

\* Note: Only when you use the external pilot type, you can select the individual pilot or centralized pilot.

When you use the internal pilot type, the pilot ports on the manifold are ineffective.

#### 3. The position and specification of the manifold sub-base ports



Port status of manifold sub-base

Port working name condition	Left side port	Right side port	Bottom port	Centralized pilot port	Individual pilot port
Ordering code					
ESV202MG	Use	Unused	Unused	Unused	Use
ESV202MGR	Unused	Use	Unused	Unused	Use
ESV202MGB	Unused	Unused	Use	Unused	Use
ESV202MGW	Use	Unused	Unused	Use	Unused
ESV202MGWR	Unused	Use	Unused	Use	Unused
ESV202MGWB	Unused	Unused	Use	Use	Unused

Note: Please seal the bottom port by plug, when it is unused.

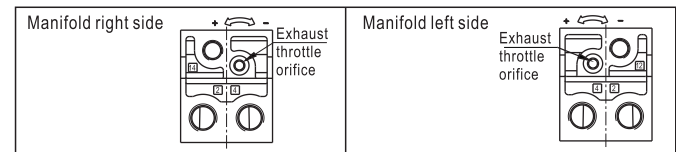
The above list is an example of 200M series' ordering code, the other series is follow the same pattern, only need to change the series code.

#### 4. Exhaust throttle function

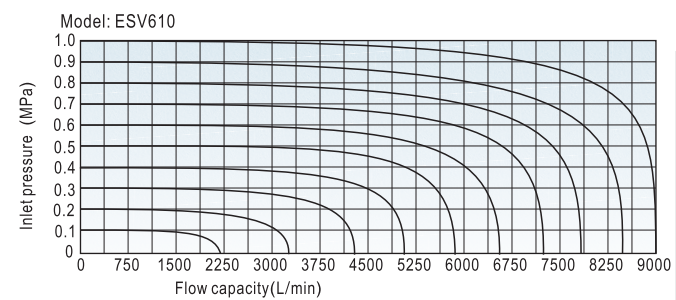
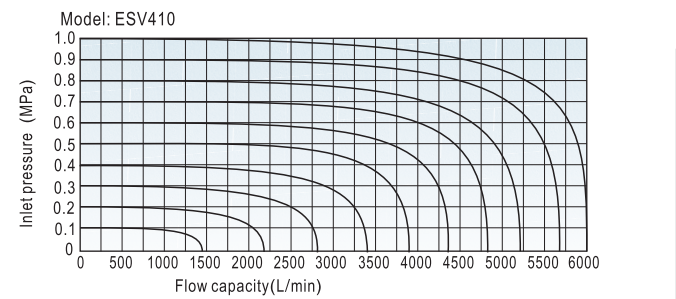
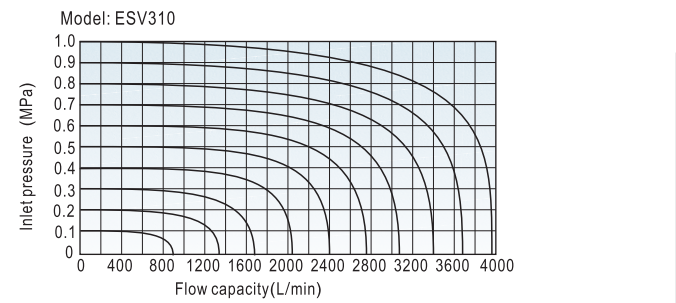
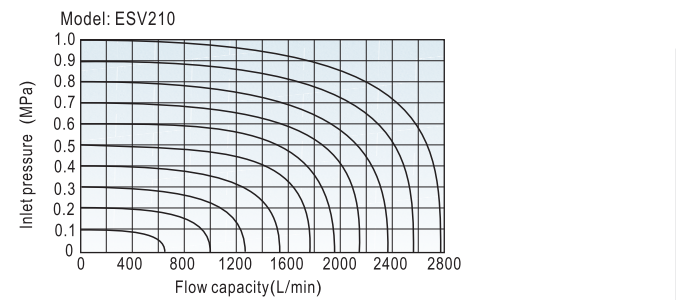
4.1. The manifold has exhaust throttle function, the below picture shows the position of the exhaust throttle orifices on each side.

4.2. Use allen key to adjust the screw.

4.3. Rotate the screw clockwise to reduce the exhaust orifice, rotate the screw counter-clockwise to enlarge the exhaust orifice.



### ■ Flow chart



# ISO Standard solenoid valve(5/2, 5/3 way)

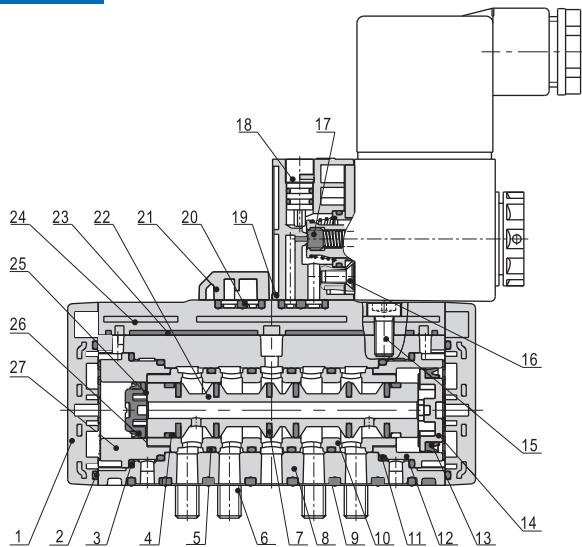


## ESV200, 300, 400, 600 Series

### Inner structure



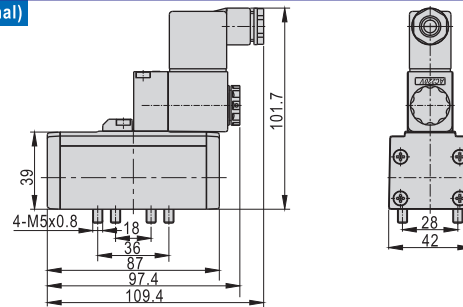
ESV210 (Terminal)



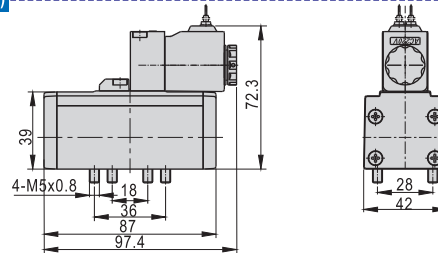
NO.	Item	NO.	Item	NO.	Item
1	Bottom cover	10	Spacer	19	Pilot kit
2	O-ring	11	O-ring	20	Gasket
3	O-ring	12	Big piston sheath	21	Cover plate
4	Wear ring	13	Big piston O-ring	22	Spool
5	O-ring	14	Big piston	23	Upper cover gasket
6	Screw	15	Screw	24	Upper cover
7	O-ring	16	Screw	25	Small piston
8	Body	17	Gasket	26	Small piston O-ring
9	Gasket	18	Manual override	27	Small piston sheath

### Dimensions(ESV200 Series)

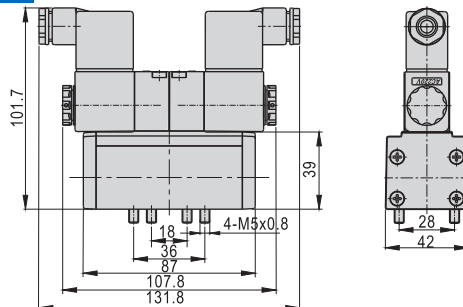
ESV210 (Terminal)



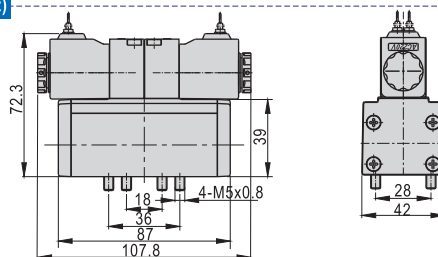
ESV210 (Grommet)



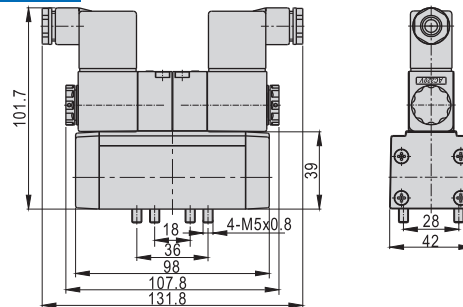
ESV220 (Terminal)



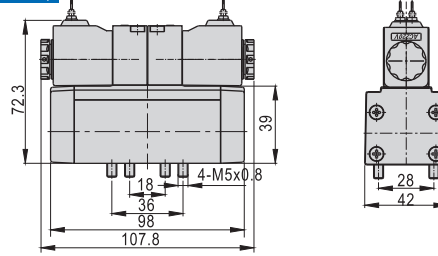
ESV220 (Grommet)



ESV230C(EIP) (Terminal)



ESV230C(EIP) (Grommet)

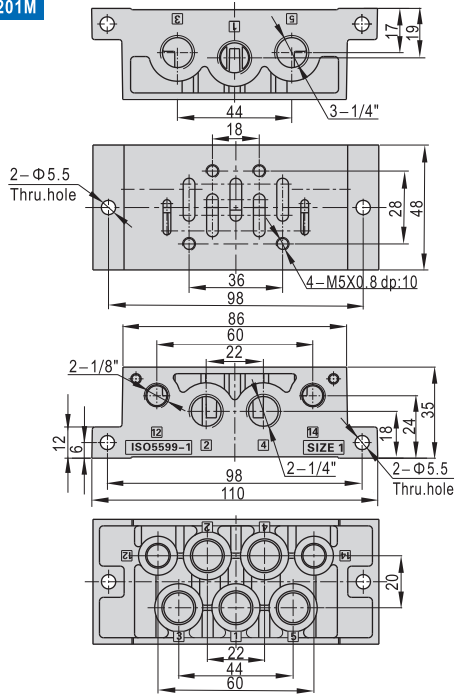


# ISO Standard solenoid valve(5/2, 5/3 way)

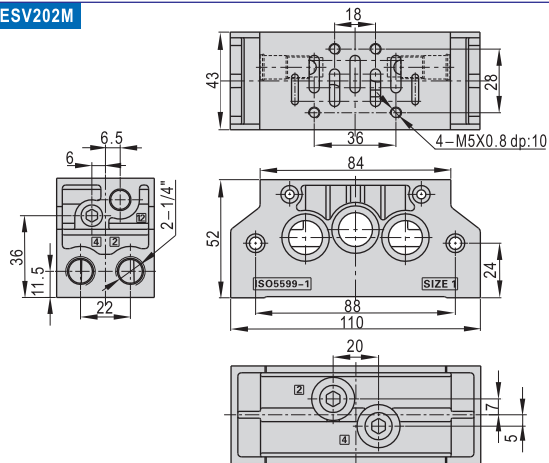


## ESV200, 300, 400, 600 Series

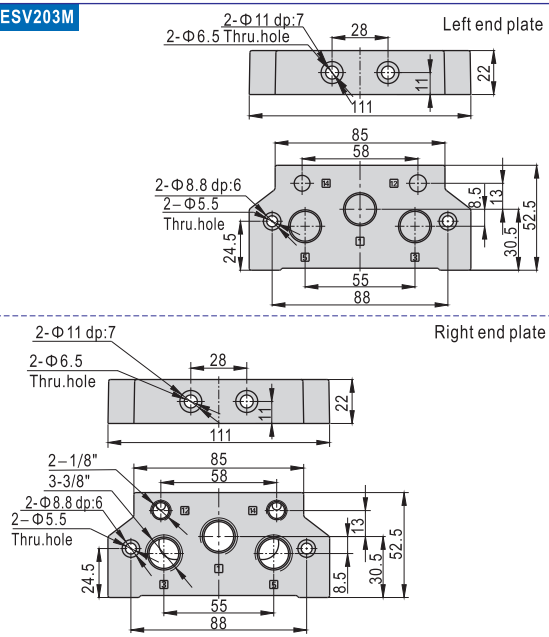
ESV201M



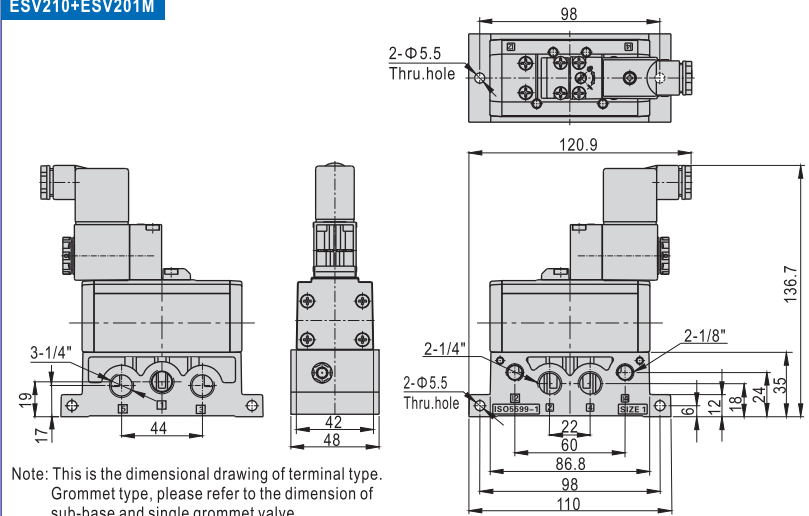
ESV202M



ESV203M

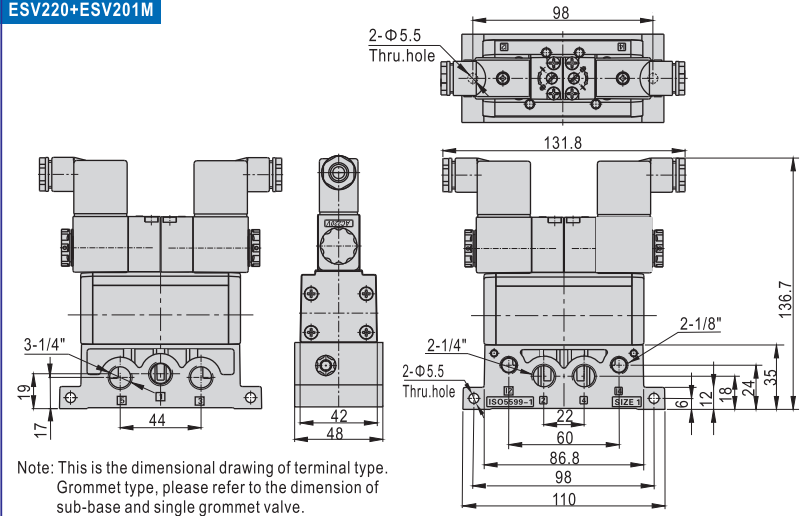


ESV210+ESV201M



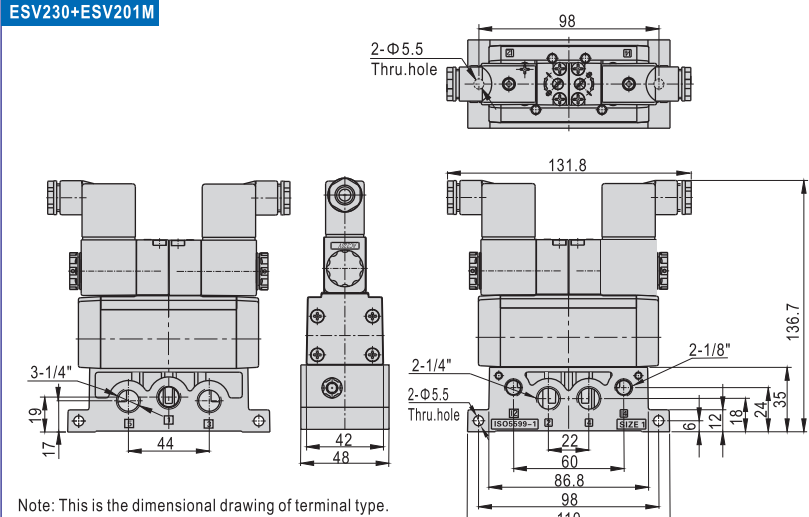
Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

ESV220+ESV201M



Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

ESV230+ESV201M



Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.



ESV

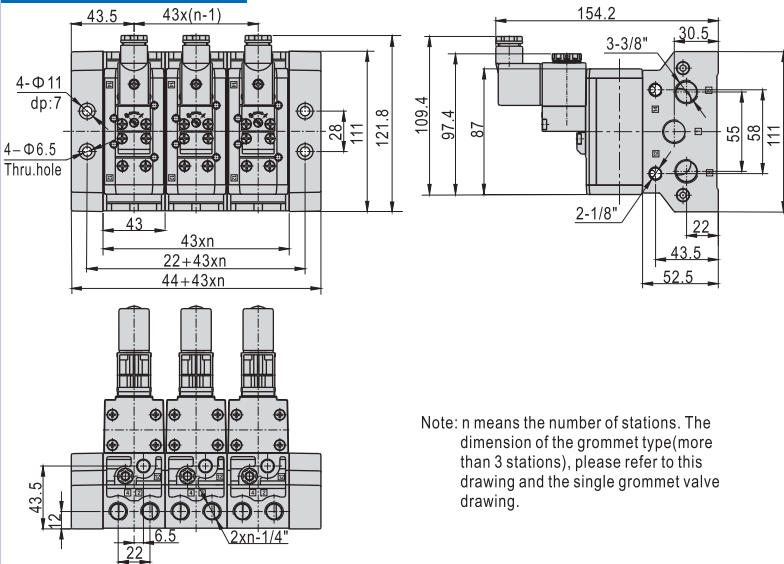


# ISO Standard solenoid valve(5/2, 5/3 way)

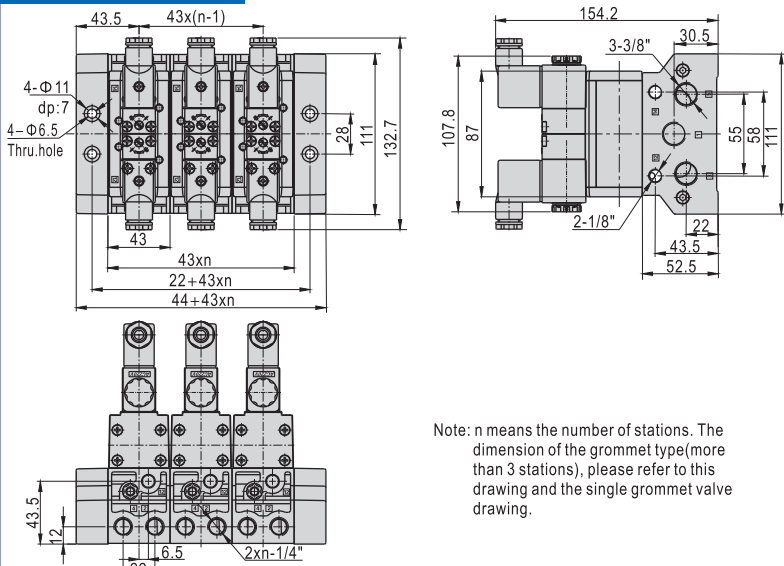
ESV200, 300, 400, 600 Series



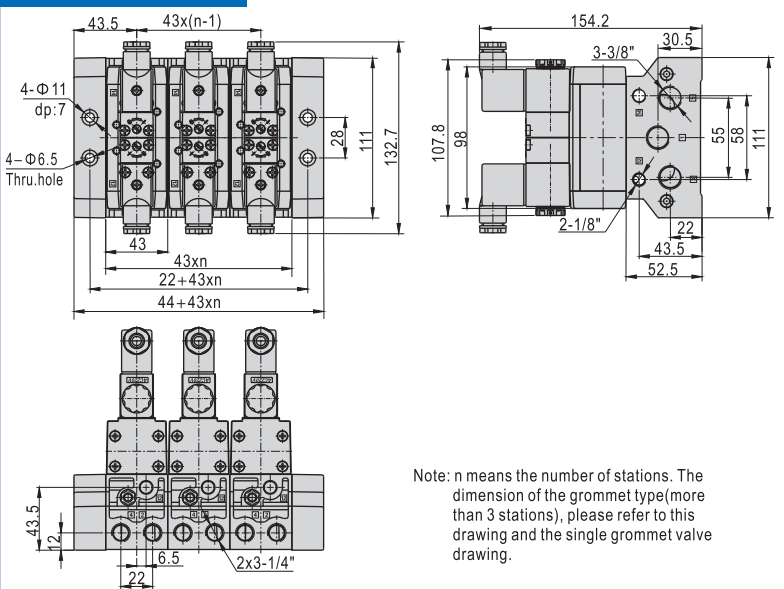
### ESV210+ESV202M+ESV203M



### ESV220+ESV202M+ESV203M

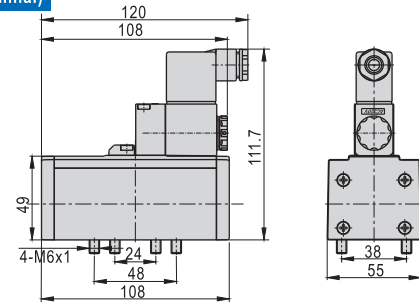


### ESV230+ESV202M+ESV203M

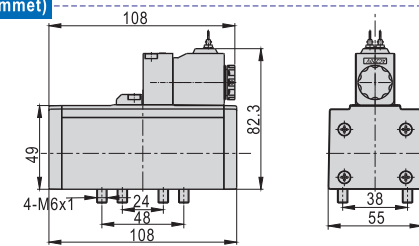


### Dimensions (ESV300 Series)

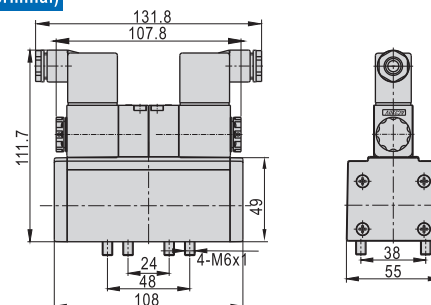
#### ESV310 (Terminal)



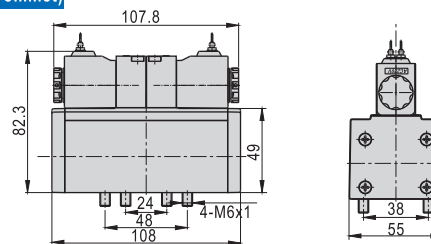
#### ESV310 (Grommet)



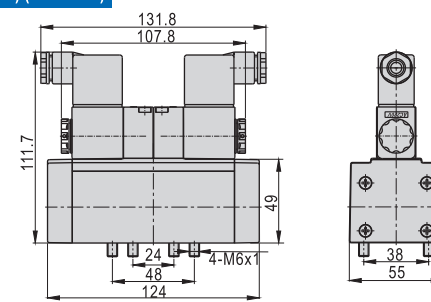
#### ESV320 (Terminal)



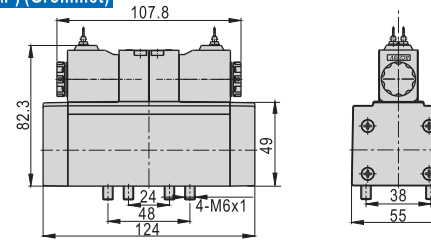
#### ESV320 (Grommet)



#### ESV330C(EIP) (Terminal)



#### ESV330C(EIP) (Grommet)

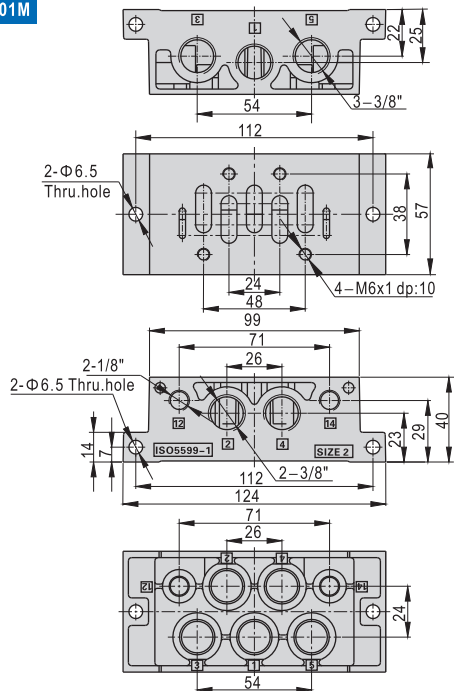


# ISO Standard solenoid valve(5/2, 5/3 way)

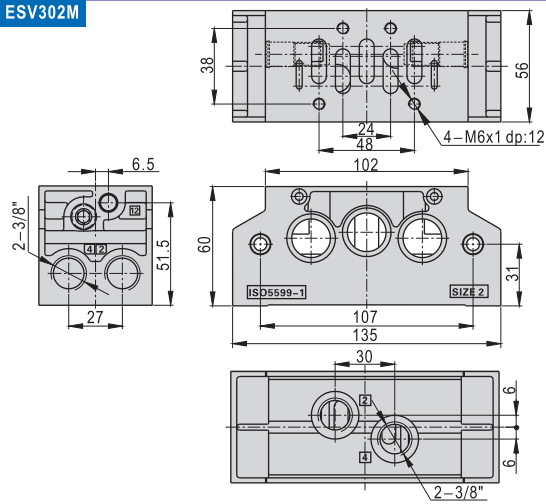


## ESV200, 300, 400, 600 Series

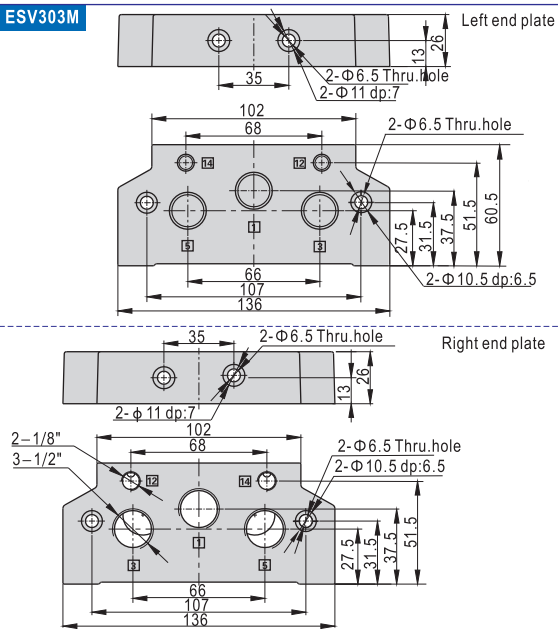
ESV301M



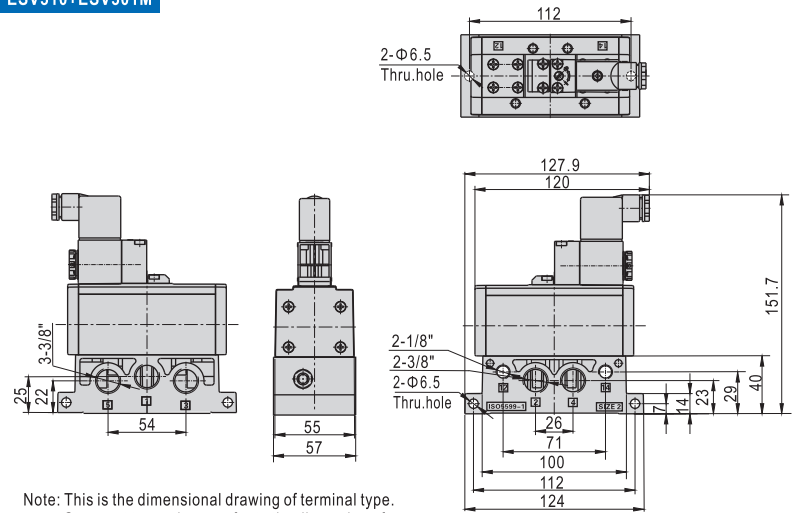
ESV302M



ESV303M

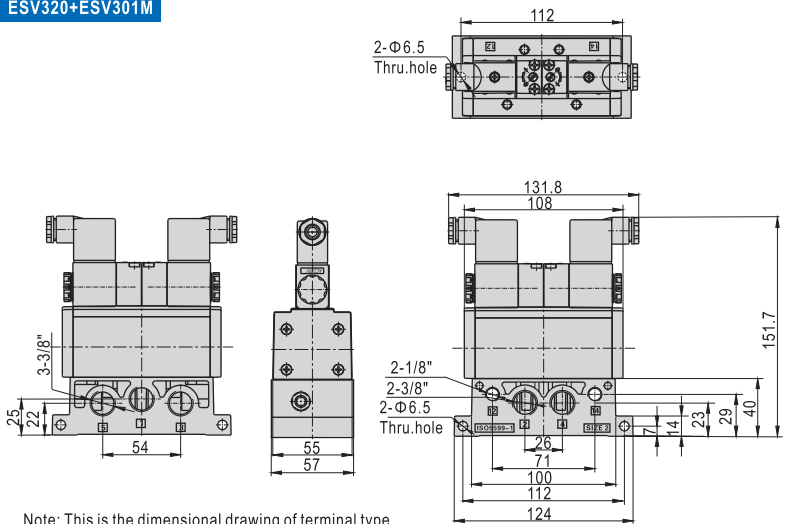


ESV310+ESV301M



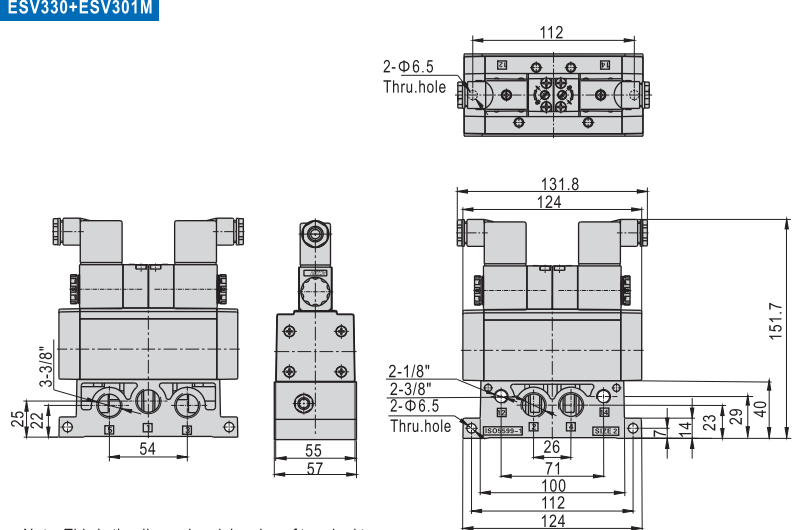
Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

ESV320+ESV301M



Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

ESV330+ESV301M



Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.



ESV



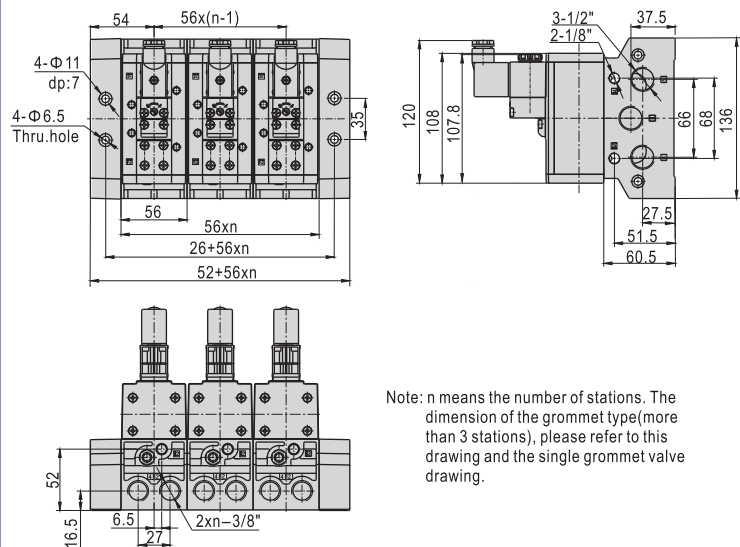
# ISO Standard solenoid valve(5/2, 5/3 way)



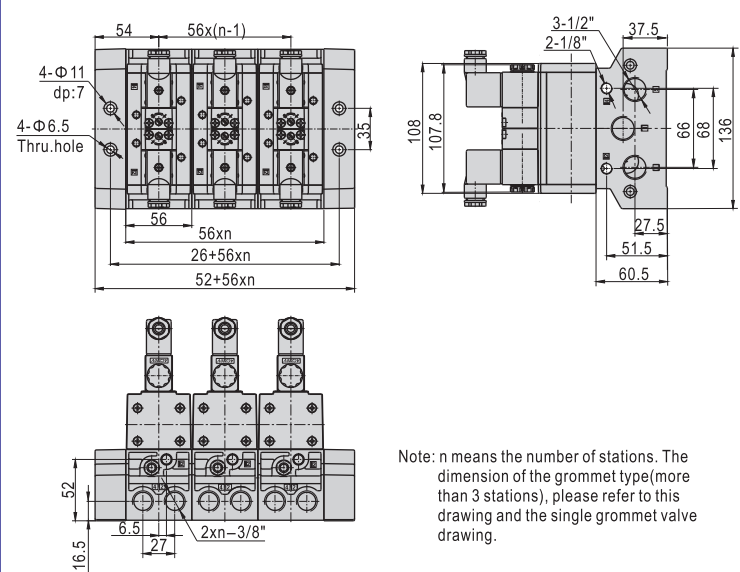
## ESV200, 300, 400, 600 Series



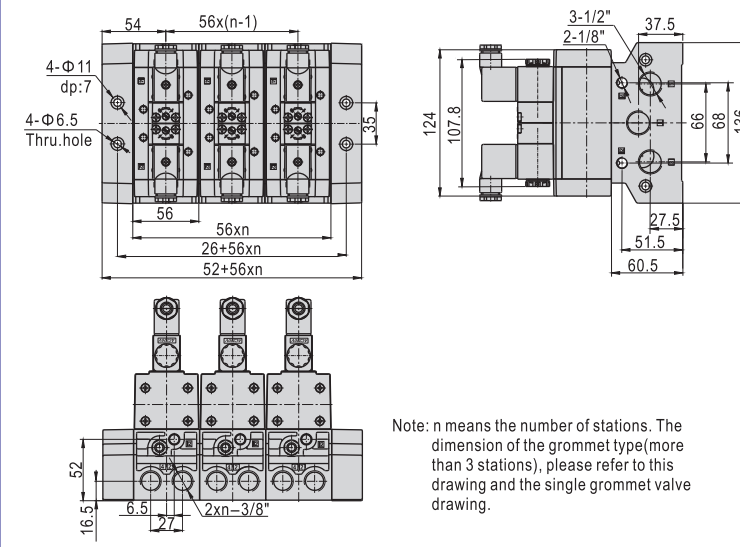
### ESV310+ESV302M+ESV303M



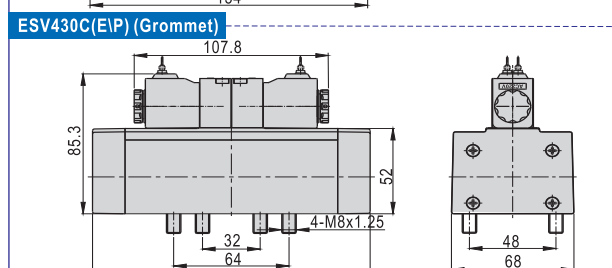
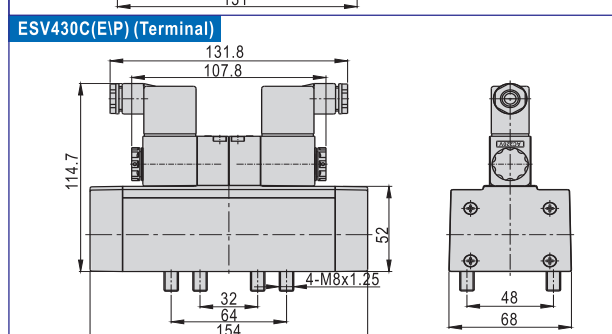
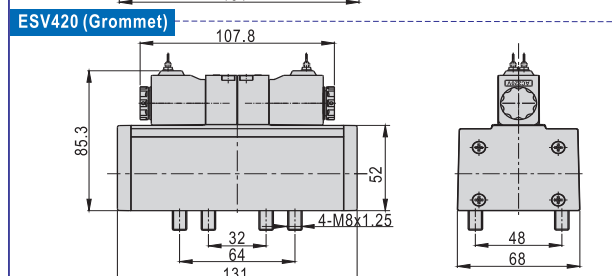
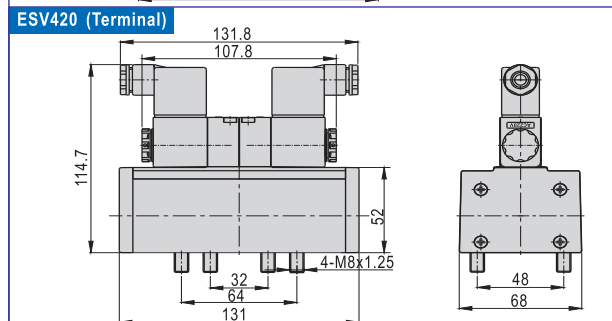
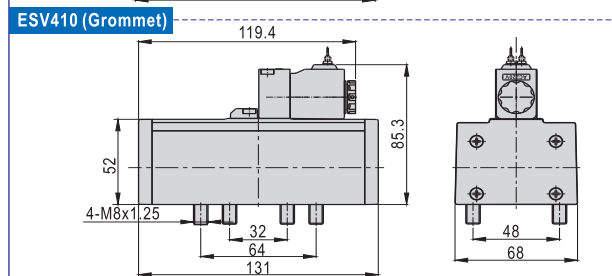
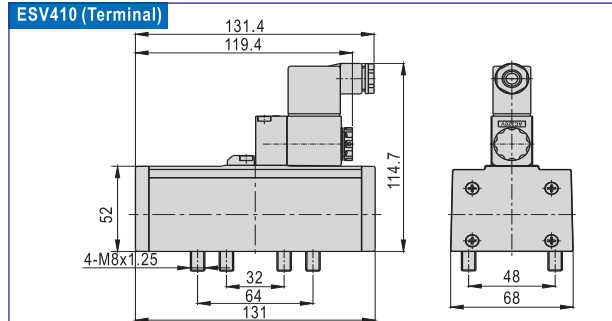
### ESV320+ESV302M+ESV303M



### ESV330+ESV302M+ESV303M



### Dimensions (ESV400 Series)







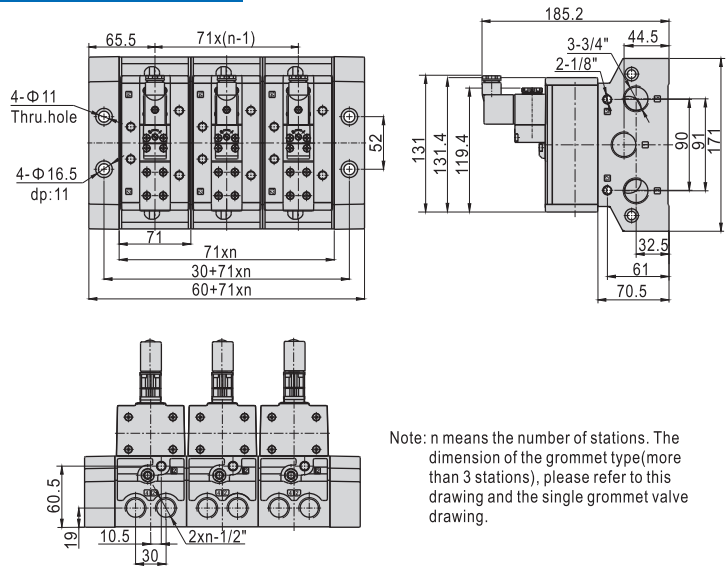
# ISO Standard solenoid valve(5/2, 5/3 way)



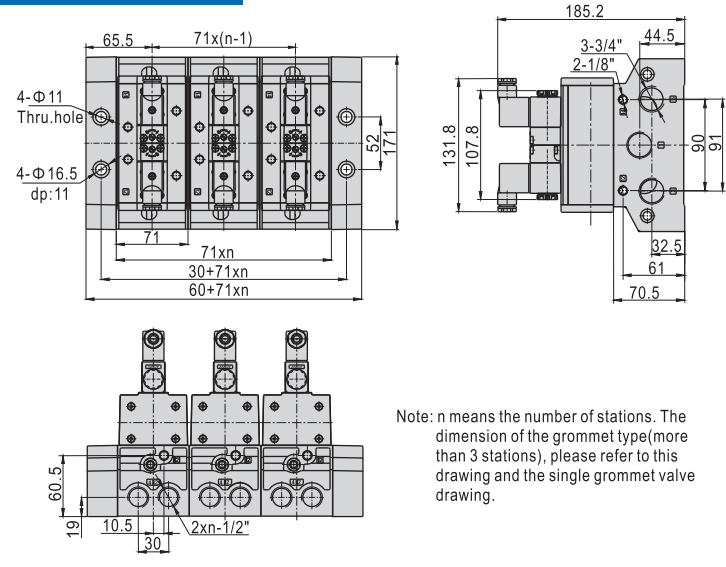
## ESV200, 300, 400, 600 Series



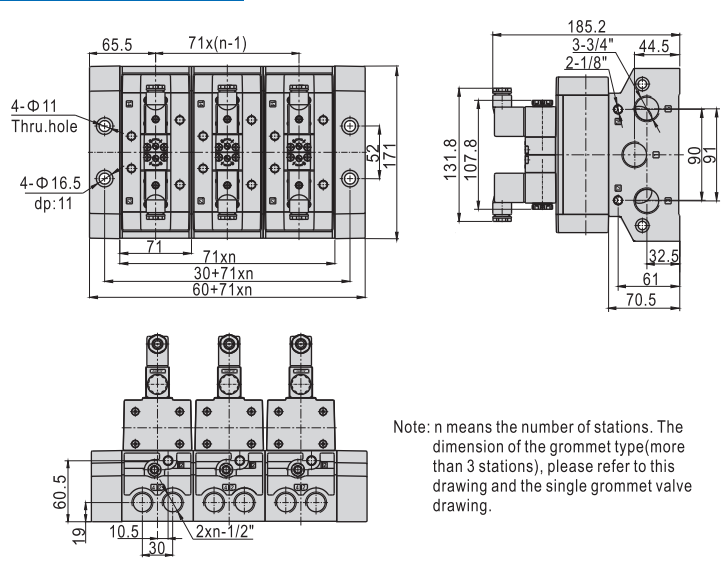
### ESV410+ESV402M+ESV403M



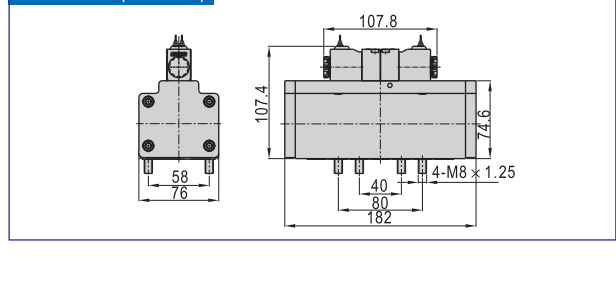
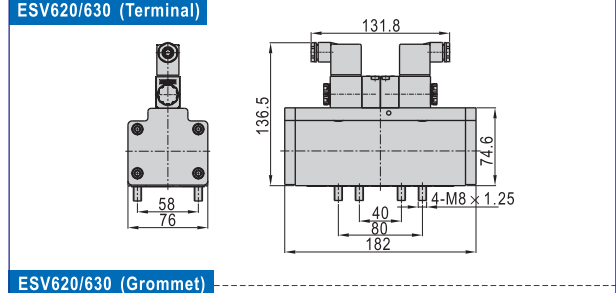
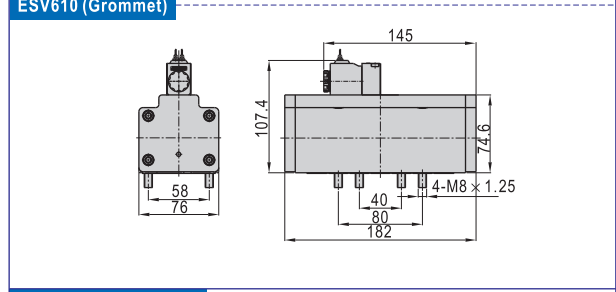
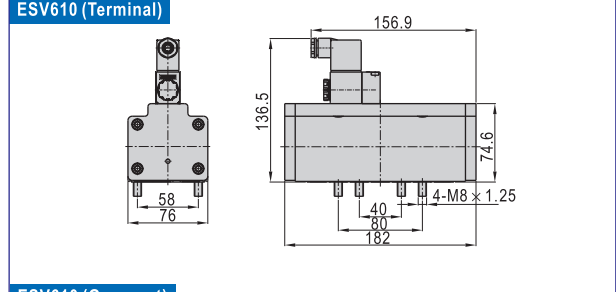
### ESV420+ESV402M+ESV403M



### ESV430+ESV402M+ESV403M



### Dimensions(ESV600 Series)

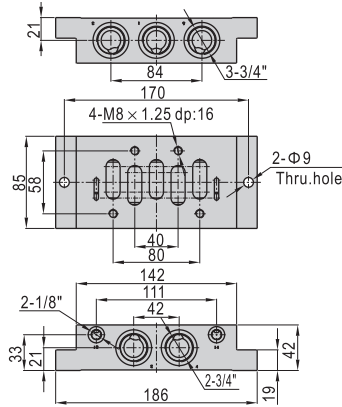


# ISO Standard solenoid valve(5/2, 5/3 way)

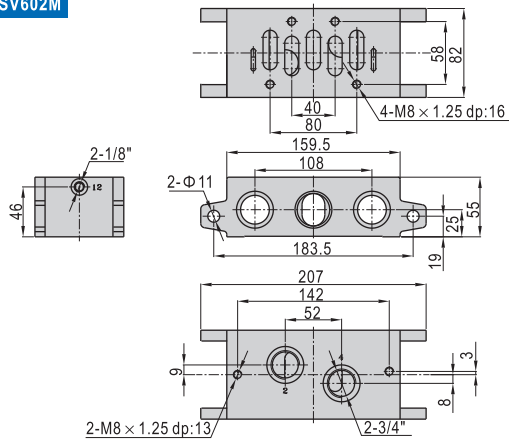


## ESV200, 300, 400, 600 Series

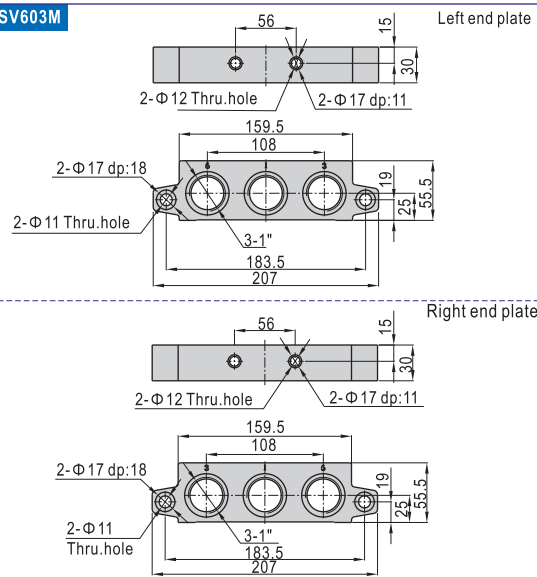
**ESV601M**



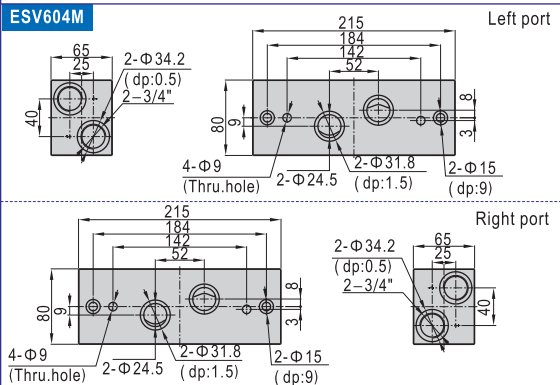
**ESV602M**



**ESV603M**

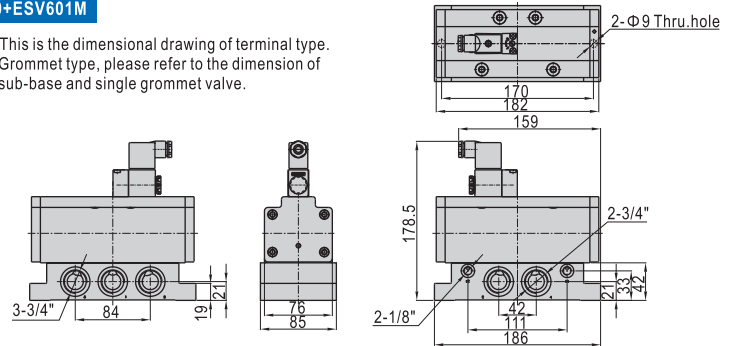


**ESV604M**



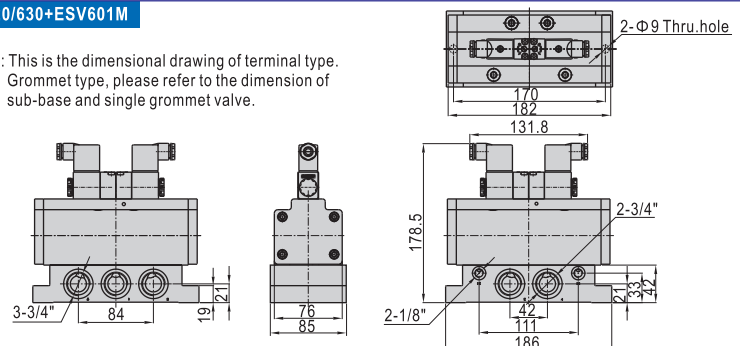
**ESV610+ESV601M**

Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

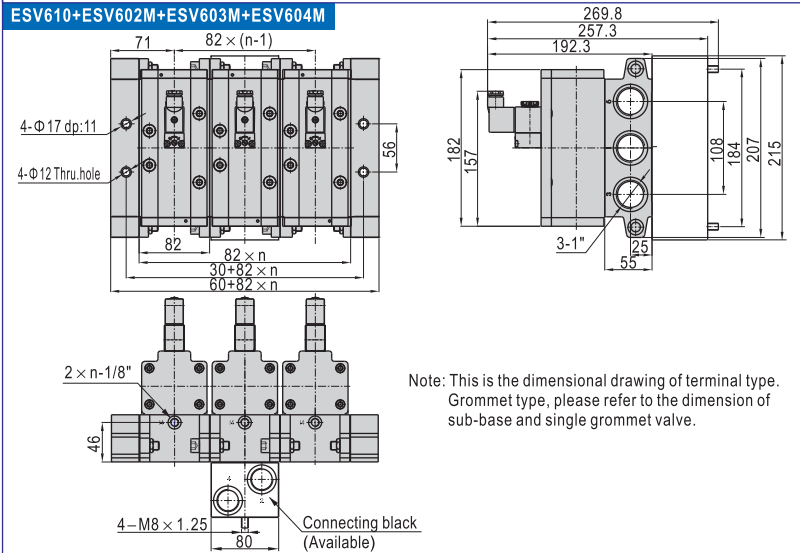


**ESV620/630+ESV601M**

Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

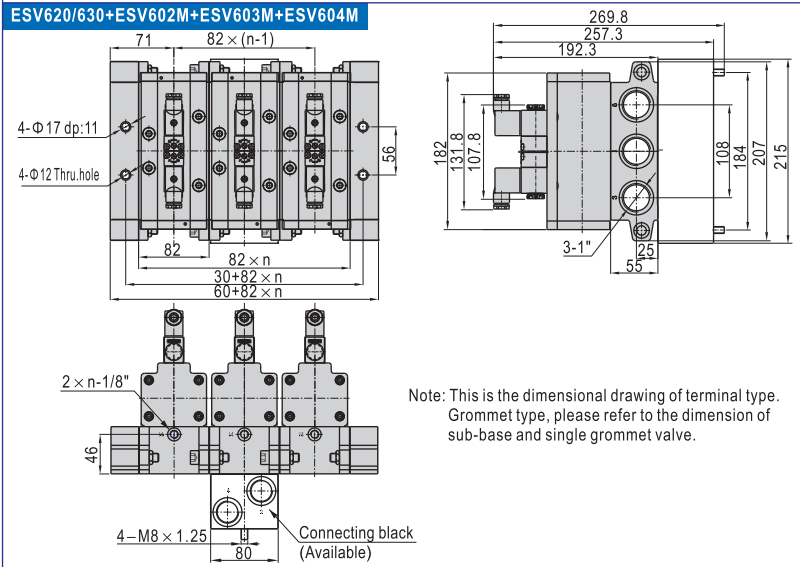


**ESV610+ESV602M+ESV603M+ESV604M**



Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

**ESV620/630+ESV602M+ESV603M+ESV604M**



Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.



ESV



# Coil

## 080, 092 Series



The coils and internal wiring drawing in connector and corresponding table of fitted products are provided for convenience of your selection.

### Ordering code

**CD A080 A**

<b>Coil type</b>	<b>Voltage</b>
CD: Terminal	A: AC220V
CL: Grommet	B: DC24V
	C: AC110V
<b>Coil's bore</b>	E: AC24V
A080: The first product of $\Phi 8.0\text{mm}$ bore)	F: DC12V
A092: The first product of $\Phi 9.0\text{mm}$ bore)	

### Attentions for block wiring

Coil terminal with DC specification has polar indicator lights, thus when wiring, notice positive and negative poles, "1" shall be connected to positive pole, "2" to negative pole. If the poles are connected inversely, the indicator lights will not shine but valve still actuates.

"1" to positive pole      "2" to negative pole

### 080 Series

Production series	Coil type	Voltage	Coil inside connection diagram	Connector type	Connector inside connection diagram	Memo
3V100 Series 4V100 Series 4M100 Series	CDA080 Terminal	AC		PL1515T-P1	-	Applied to CDA080 AC、DC type coil
	CDA080 Terminal	DC		PL1515T-P2		Applied to CDA080 AC type coil
	CDA080 Terminal	DC		PL1515T-P3		Applied to CDA080 DC type coil
	CLA080 Grommet	AC		-	-	-
	CLA080 Grommet	DC		-	-	-

### 092 Series

Production series	Coil type	Voltage	Coil inside connection diagram	Connector type	Connector inside connection diagram	Memo
3V1 Series 3V200 Series 3V300 Series 4V200 Series 4V300 Series 4V400 Series 4M200 Series 4M300 Series ESV200 Series ESV300 Series ESV400 Series ESV600 Series	CDA092 Terminal	AC		4V210-005-P1	-	Applied to CDA092 AC、DC type coil
	CDA092 Terminal	DC		4V210-005-P2		Applied to CDA092 AC type coil
	CDA092 Terminal	DC		4V210-005-P3		Applied to CDA092 DC type coil
	CLA092 Grommet	AC		-	-	-
	CLA092 Grommet	DC		-	-	-

