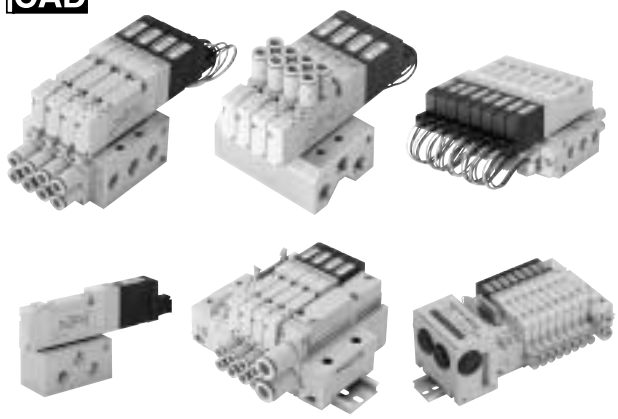
CAD drawing data catalog is available.



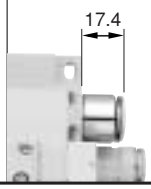
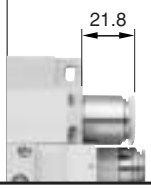
KOGANEI

VALVES GENERAL CATALOG

SOLENOID VALVES F SERIES INDEX

The shapes of the dual-use different size fitting blocks for the F10, F15, and F18 series solenoid valve, and of the F18 series manifold piping block fitting for ϕ 12, have been changed.

(mm)

Fitting type	Earlier	New
Dual-use fittings for ϕ 4 and ϕ 6		
Dual-use fittings for ϕ 6 and ϕ 8		
Dual-use fittings for ϕ 8 and ϕ 10		
F18 series piping block (supply and exhaust) fitting for ϕ 12		

New valves offer more user friendly operability and improved performance.

NEW Basic VALVE

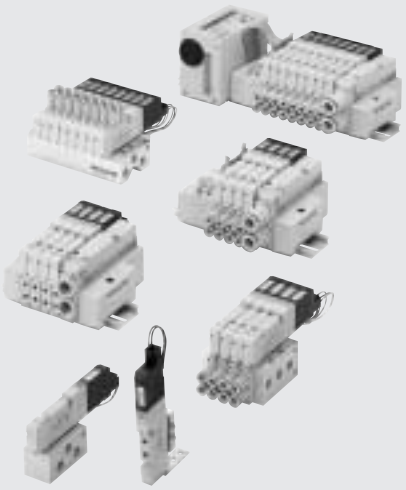
SOLENOID VALVES F SERIES

1. Single/double dual-use valves

The F Series 2-position valves' functions can be switched back and forth between the single solenoid valve and double solenoid valve by using the manual override. This enables the models to be enhanced for diversified application requirements.

Note: Excluding the T0 (T-Zero) type

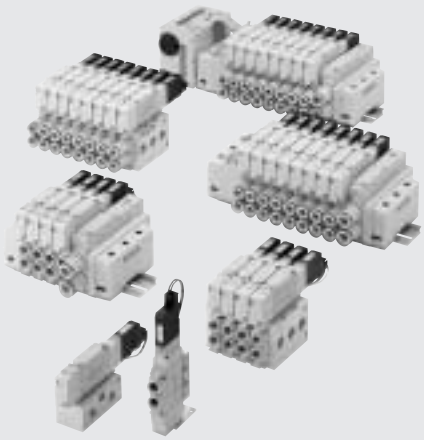
F10



Solenoid Valves F10 Series

- **Valve width:** 10mm [0.394in.]
- **Effective area:** 5mm² 〔Cv: 0.28〕
- **Applicable cylinder bore sizes:** ϕ 20 [0.787in.]～ϕ 50 [1.969in.]

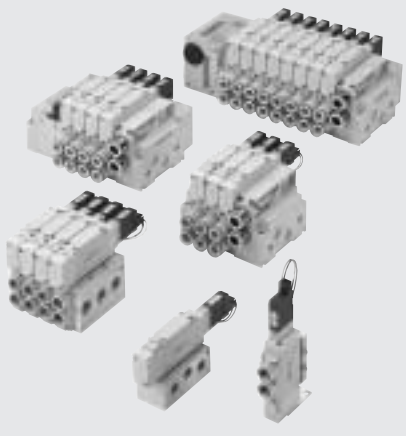
F15



Solenoid Valves F15 Series

- **Valve width:** 15mm [0.591in.]
- **Effective area:** 10mm² 〔Cv: 0.56〕
- **Applicable cylinder bore sizes:** ϕ 40 [1.575in.]～ϕ 80 [3.150in.]

F18



Solenoid Valves F18 Series

- **Valve width:** 18mm [0.709in.]
- **Effective area:** 18mm² 〔Cv: 1.0〕
- **Applicable cylinder bore sizes:** ϕ 50 [1.969in.]～ϕ 100 [3.937in.]

2. Uses dual-use fittings for different tube sizes.

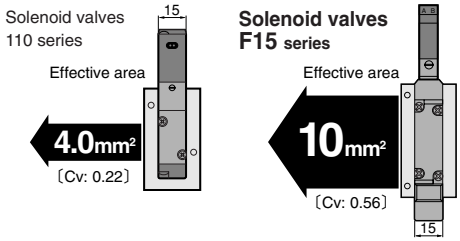
Allows tubes of different outer diameters to be connected.

Series	Applicable tube sizes
F10	φ4, φ6
F15	φ6, φ8
F18	φ8, φ10

Note: Single size fittings can also be selected.

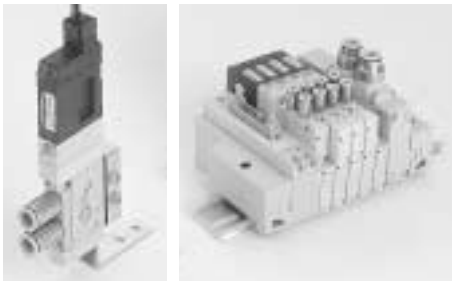
3. More compact, and higher flow rate

Flow rate up by 2～3.3 times for the same valve width (compared to the Koganei product).



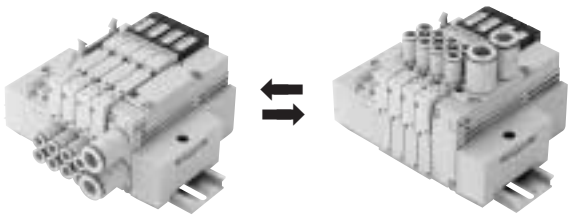
4. Single solenoid valve T0 (T-zero) type added

●**Dedicated single solenoid valves have been added to the F series solenoid valve range, sharing the same design concept for easier selection. Moreover, it allows combination mounting with earlier manifolds, offering good maintainability.**



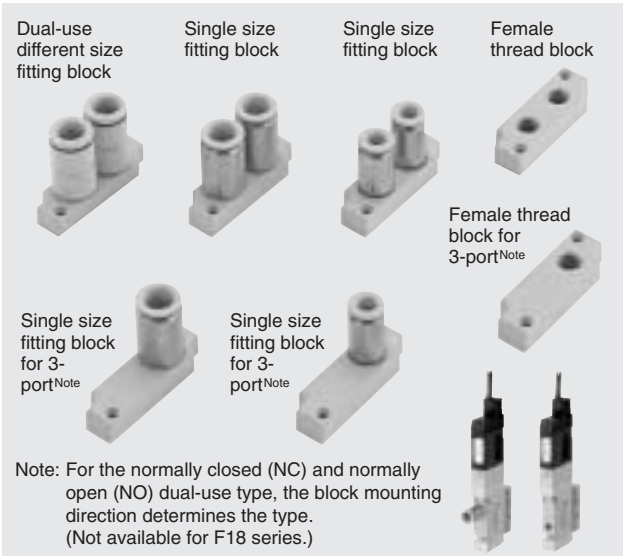
5. Offers more user friendly operability.

●**Replacing outlet blocks makes it possible to change between base piping and direct piping.**
(Except for the F type monoblock manifold and F type PC board manifold)



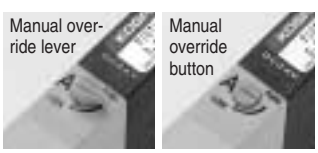
(Base piping) (Direct piping)

●**When using a 5-port valve as a 3-port valve**
To enable it to be used as a 3-port valve, a single size fitting block and female thread block for 3-port use have been newly added, widening the selection range and the enhancing usability.

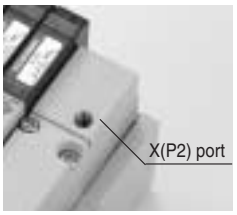


Note: For the normally closed (NC) and normally open (NO) dual-use type, the block mounting direction determines the type. (Not available for F18 series.)

●**A locking and non-locking type dual-use manual override is standard equipment. A manual override lever can also be selected. (made to order)**



●**External pilot specification can also be selected.**
External pilot (positive pressure) specification allows operation from 0 MPa main pressure. The vacuum specification can also be selected.



●**Shared connectors** (Single valve unit can also be used as a plug-in type).

●**Full range of wiring specifications**
The PC board manifold has been added to the monoblock type. A flat cable connector, D-sub connector and terminal block are provided for the split manifold plug-in type. In addition, serial transmission compatible manifolds for 12 types of systems are also available.

●**An individual air supply and exhaust are available.**
Specially designed air supply or exhaust spacers installed between the manifold and valve allow for individual air supply or exhaust.

6. Achieves power consumption of 0.9W (Current 38mA, DC24V)

※**Power consumption per one valve (for DC24V specification)**

F Series Product Range

Single Valve Unit

Valves can be used as single units by attaching inlet port blocks. Mounting brackets are also provided.

Outlet port specifications

Series	With sub-base		For single valve unit or manifold use									
	Female thread		With female thread block			With dual-use different size fitting block			With single size fitting block			
	Rc 1/8	Rc 1/4	M5	Rc 1/8	Rc 1/4	φ4, φ6	φ6, φ8	φ8, φ10	φ4	φ6	φ8	φ10
F10	●		●			●			●	●		
F15	●			●			●			●	●	
F18		●			●			●			●	●

With fitting block

With female thread block

With A type sub-base

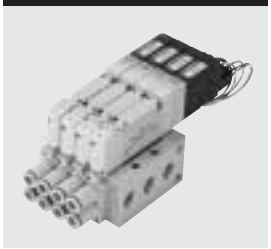
■With mounting bracket

Order codes p.525,526
F10 series dimensions p.567
F15 series dimensions p.585
F18 series dimensions p.603

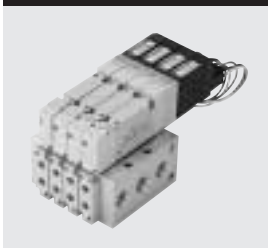
Monoblock Manifold A Type (Base Piping Type)

This base piping type manifold offers easy maintenance and cost performance. Replacing the outlet block enables its use as a direct piping type manifold.
Using a common terminal pre-wired plug connector greatly reduces wiring work.

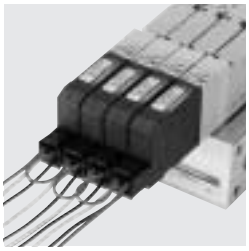
With fitting block



With female thread block



■Common terminal pre-wired plug connector



Order codes p.527,528
F10 series dimensions p.570
F15 series dimensions p.588
F18 series dimensions p.606

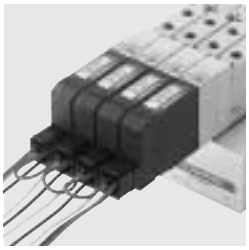
Monoblock Manifold F Type (Direct Piping Type)

The direct piping type manifold offers excellent cost performance.
Using a common terminal pre-wired plug connector greatly reduces wiring work.

With fitting block

With female thread block

■Common terminal pre-wired plug connector

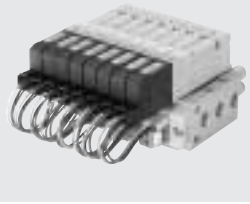


Order codes p.529,530
F10 series dimensions p.571
F15 series dimensions p.589
F18 series dimensions p.607

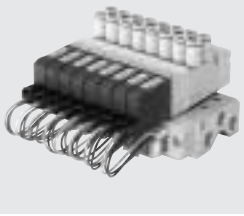
PC Board Manifold

A MIL type 20-pin flat cable connector is installed on the monoblock manifold to achieve both wiring savings and cost performance. Combined use of the Koganei PC wiring system and wiring specification -F201 allows for more effective wiring savings.
Note: Not available in the F18 series.

A type (Base piping type)



F type (Direct piping type)

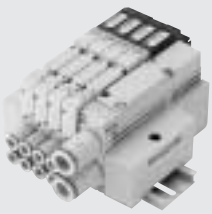


Order codes p.531～536
F10 series dimensions p.572
F15 series dimensions p.590

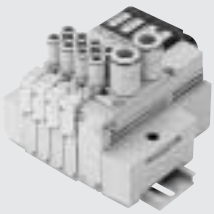
Split Manifold Non-Plug-in Type

Enables easy addition or removal of manifold blocks. This system offers more flexibility in conforming to changes in specifications.

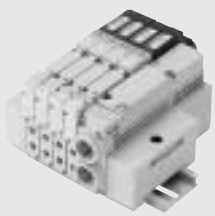
Manifold port with fitting block



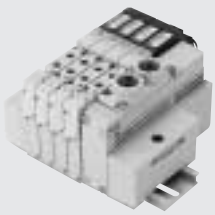
Valve port with fitting block



Manifold port with female thread block



Valve port with female thread block



Order codes p.537～540
F10 series dimensions p.573
F15 series dimensions p.591
F18 series dimensions p.608

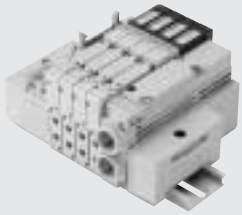
Split Manifold Plug-in Type

Manifold conforms to reduced wiring work. Adding on wiring allows adding manifold units.
Combined use of the Koganei PC wiring system and wiring specification -F201 offers more effective wiring savings.

Manifold port with fitting block

Valve port with fitting block

Manifold port with female thread block

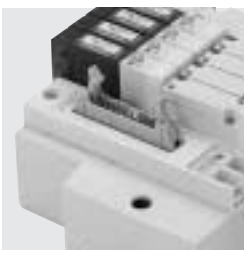


Valve port with female thread block

Order codes p.541～544
F10 series dimensions p.574
F15 series dimensions p.592
F18 series dimensions p.609

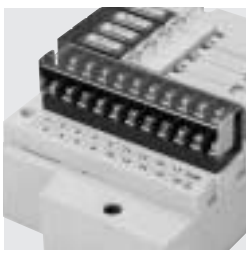
Wiring

■ **Flat cable connector**



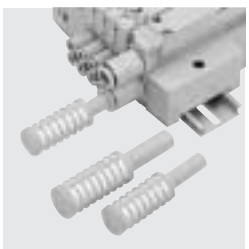
■ **D-sub connector**

■ **Terminal block**



Additional Parts

■ **Muffler**



Dimensions
F10 : p. 578
F15 : p. 596
F18 : p. 613

Serial Transmission Compatible Manifold

- **For Mitsubishi Electric MELSECNET/MINI-S3**
- **For Mitsubishi Electric MELSEC I/O LINK**
- **For Mitsubishi Electric CC-Link**
- **For NKE, KURODA PRECISON INDUSTRIES UNI-WIRE® System**
- **For KOYO ELECTRONICS INDUSTRIES SA Bus**
- **For SUNX S-LINK**
- **For OMRON SYSBUS Wire System**
- **For OMRON B7A Link Terminal**
- **For OMRON CompoBus/D**
- **For OMRON CompoBus/S**
- **For Fuji Electric FA Components & Systems T Link Mini**
- **For KEYENCE KZ-R**

※For details, see p.518～520.

Order codes p.545～552
F10 series dimensions p.577
F15 series dimensions p.595
F18 series dimensions p.612

Cylinder Operating Speed Table (For reference)

1. Cylinder mounting direction: Vertical

Series	Cylinder speed mm/s [in./sec.]	Cylinder series/Conditions/Cylinder bore size: mm [in.]									
		Pen Cylinders Pressure : 0.5MPa [73psi.] Load ratio : 50% Cylinder stroke : 150mm [5.91in.] Piping (outer diameter × inner diameter × length) : φ6×φ4×1000mm		**Slim Cylinders** Pressure : 0.5MPa [73psi.] Load ratio: 50% Cylinder stroke : 150mm [5.91in.] Piping (outer diameter × inner diameter × length) : φ6×φ4×1000mm				**DYNA Cylinders** Pressure : 0.5MPa [73psi.] Load ratio : 50% Cylinder stroke : 150mm [5.91in.] Piping (outer diameter × inner diameter × length) : φ10×φ7.5×1000mm			
		10 [0.394]	16 [0.630]	20 [0.787]	25 [0.984]	32 [1.260]	40 [1.575]	50 [1.969]	63 [2.480]	80 [3.150]	100 [3.937]
F10 series Effective area 5mm² 〔Cv: 0.28〕	150 [5.9]	※									
	300 [11.8]										
	450 [17.7]		※					★			
	600 [23.6]										
	750 [29.5]			★							
F15 series Effective area 10mm² 〔Cv: 0.56〕	150 [5.9]	※									
	300 [11.8]										
	450 [17.7]		※					★	★		
	600 [23.6]										
	750 [29.5]			★							
F18 series Effective area 18mm² 〔Cv: 1.0〕	150 [5.9]	※									
	300 [11.8]										
	450 [17.7]		※					★	★	★	
	600 [23.6]										
	750 [29.5]			★							

★ : Use each cylinder type within its operating speed range.
※ : Cylinder speed is limited by the connection port orifice size.
Remark: For a load ratio of other than 50%, see the “Cylinder Operating Speed” in the specifications for each valve.

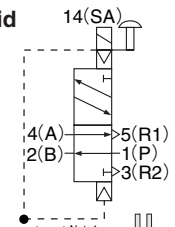
2. Cylinder mounting direction: Horizontal (Rolling bearing: Friction coefficient $\mu = 0.1$)

Series	Cylinder speed mm/s [in./sec.]	Cylinder series/Conditions/Cylinder bore size: mm [in.]									
		Pen Cylinders Pressure : 0.5MPa [73psi.] Load ratio : 50% Cylinder stroke : 150mm [5.91in.] Piping (outer diameter × inner diameter × length) : φ6×φ4×1000mm		**Slim Cylinders** Pressure : 0.5MPa [73psi.] Load ratio: 50% Cylinder stroke : 150mm [5.91in.] Piping (outer diameter × inner diameter × length) : φ6×φ4×1000mm				**DYNA Cylinders** Pressure : 0.5MPa [73psi.] Load ratio : 50% Cylinder stroke : 150mm [5.91in.] Piping (outer diameter × inner diameter × length) : φ10×φ7.5×1000mm			
		10 [0.394]	16 [0.630]	20 [0.787]	25 [0.984]	32 [1.260]	40 [1.575]	50 [1.969]	63 [2.480]	80 [3.150]	100 [3.937]
F10 series Effective area 5mm² 〔Cv: 0.28〕	150 [5.9]										
	300 [11.8]	※									
	450 [17.7]		※					★			
	600 [23.6]										
	750 [29.5]			★	★						
F15 series Effective area 10mm² 〔Cv: 0.56〕	150 [5.9]										
	300 [11.8]	※									
	450 [17.7]		※					★	★		
	600 [23.6]										
	750 [29.5]			★	★	★	★				
F18 series Effective area 18mm² 〔Cv: 1.0〕	150 [5.9]	※									
	300 [11.8]	※									
	450 [17.7]		※					★	★	★	
	600 [23.6]										
	750 [29.5]			★	★	★	★				

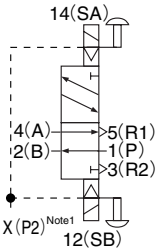
★ : Use each cylinder type within its operating speed range.
※ : Cylinder speed is limited by the connection port orifice size.
Remark: For a load ratio of other than 50%, see the “Cylinder Operating Speed” in the specifications for each valve.

5-port, 2-position

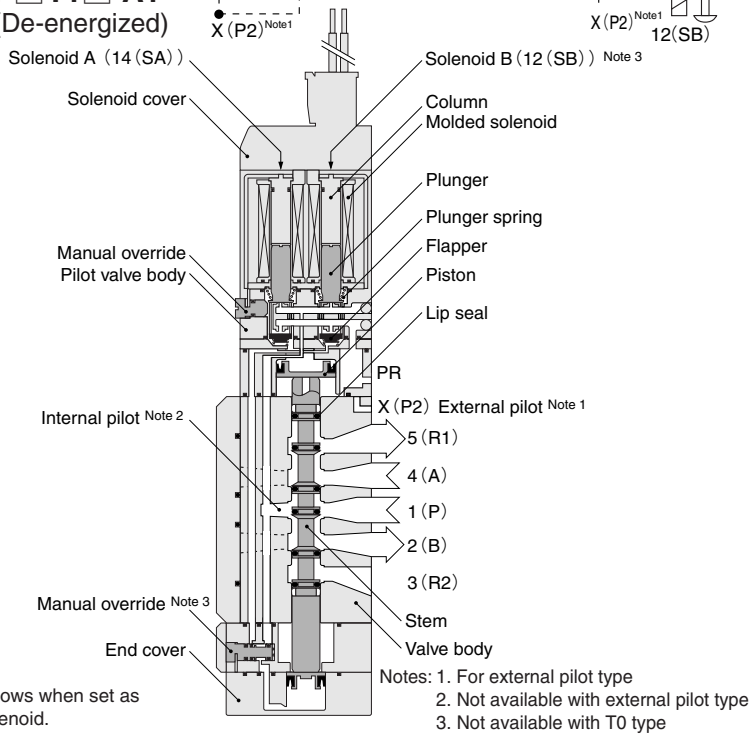
When set as a single solenoid or T0 type



When set as a double solenoid



F□T1□-A1
(De-energized)



※Diagram shows when set as a single solenoid.

Notes: 1. For external pilot type
2. Not available with external pilot type
3. Not available with T0 type

Remark: When using a 5-port valve as a 3-port valve, see p.507.

Major Parts and Materials

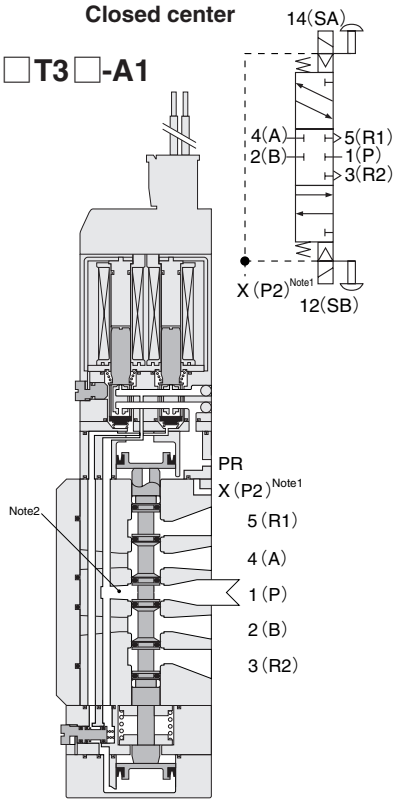
Parts			Materials
Valve	Body		Aluminum die-casting
	Stem		Aluminum alloy
	Lip seal		Synthetic rubber
	Flapper		
	Sub-base		Aluminum alloy (anodized)
	Plunger		Magnetic stainless steel
	Column		
	End cover		Plastic
Manifold	Body	Monoblock	Aluminum alloy (anodized)
		Split type	Plastic
	Block-off plate		Mild steel (nickel plated)
	Seal		Synthetic rubber

5-port, 3-position

(Both 14 (SA) and 12 (SB) are de-energized)

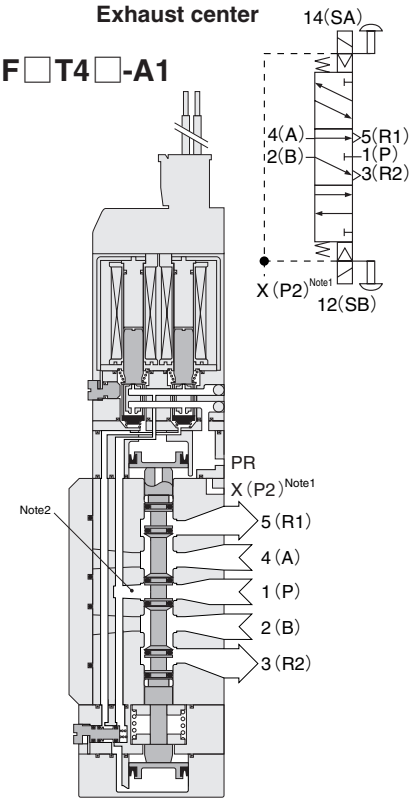
Closed center

F□T3□-A1



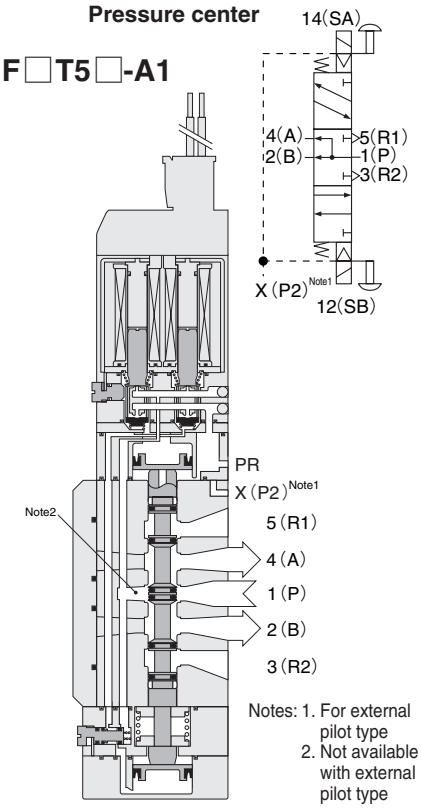
Exhaust center

F□T4□-A1



Pressure center

F□T5□-A1



Notes: 1. For external pilot type
2. Not available with external pilot type

Solenoid

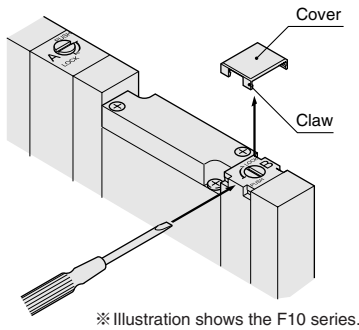
Single and double solenoid switching procedure

By switching the manual override, model **F□T1** (2-position valve) can be used as either a single solenoid valve or a double solenoid valve (not possible with a 3-position valve). Note that the **F□T1** is set to the single solenoid specification at shipping.

Switching from a single solenoid valve to a double solenoid valve

1. As shown in Fig.1, insert the flatblade tip of a small screwdriver into the gap between the valve and the cover, and then peel it off and remove the cover.

Caution: As shown in Fig.1, make sure to insert a small screwdriver from the side of the valve cover. The cover claw may be damaged when the cover is removed from the direction of the valve stem. Never remove the cover for any reason other than valve function switching.



※Illustration shows the F10 series.

Figure 1

2. As shown in Fig.2, use a small screwdriver, etc. to turn the manual override on the B side by 90 degrees in the counterclockwise direction, so that the manual override slit is horizontal, as shown on the right side of the figure. Then the unit can be used as a double solenoid valve. When using it as a double solenoid valve, the override is used as the manual override for the B side.

Caution: When using it as a double solenoid valve, do not attach the cover that was removed in Fig. 1.

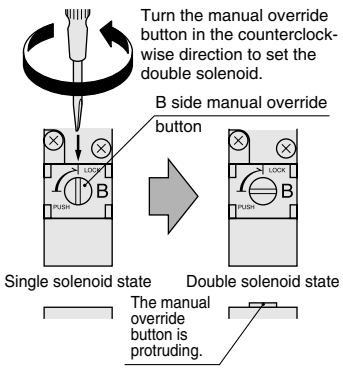


Figure 2

Switching from a double solenoid valve to a single solenoid valve

As shown in Fig.3, use a small screwdriver, etc. to push lightly against the manual override button, and then turn it by 90 degrees in the clockwise direction, so that the manual override button's slit is in the vertical direction, and then attach the cover.

Caution: The cover has directionality (F15 and F18 series only). When attaching, always align the detent on the back of the cover with the manual override button's slit, as shown in Fig.4.

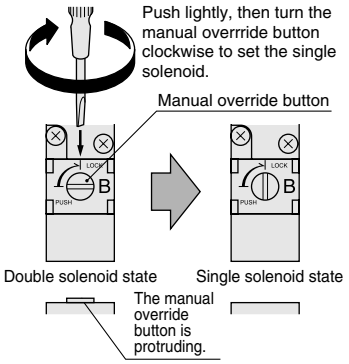


Figure 3

Note about the wiring for the above switching

See the "Wiring instructions" to the right.

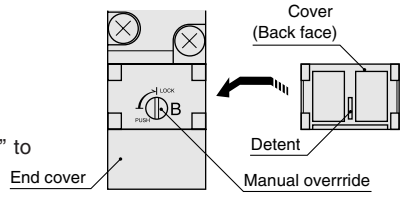
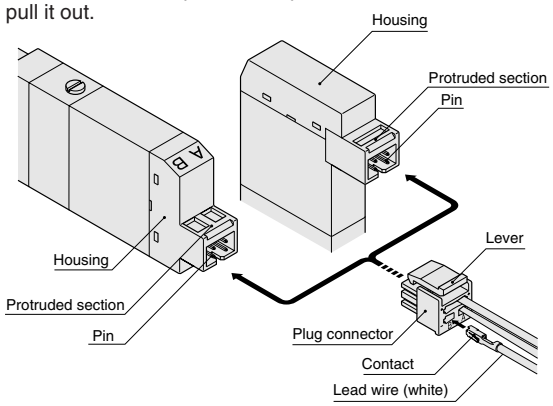


Figure 4

Wiring instructions (When used as a single unit, non-plug-in type manifold)

1. Attaching and removing plug connector

Use fingers to insert the connector into the pin, push it in until the lever claw latches onto the protruded section of the connector housing, and complete the connection.
To remove the connector, squeeze the lever along with the connector, lift the lever claw up from the protruded section of the housing, and pull it out.



Cautions: **1.** When removing the connector, confirm that the lever claw is positively disengaged from the protruded section before pulling out. The housing may be damaged if it is pulled out while engaged with the protruded section.

2. The plug connector lead wires for model **F□T1** (2-position valve) are set to the single solenoid specification at shipping (for plug connector types).
When switching from a single solenoid to a double solenoid specification for use, disconnect the plug connector from the valve, check the hook directions on the lead wire (white) with the contacts, and then insert the lead wire into the plug connector's B side□ hole (see the illustration above). Use the same procedure to switch the manifold type single solenoid to a double solenoid specification.

3. When using the plug-in type manifold, caution should be exercised that even if the valve has been switched to a double solenoid, no power will be supplied to the B side solenoid unless the valve base wiring is set to the double wiring.

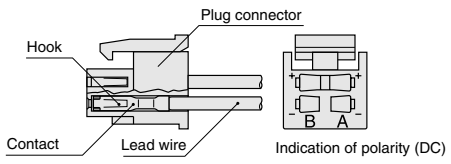
2. Attaching and removing plug connector and contact

●Attaching

Insert the contact with a lead wire into a plug connector □ hole until the contact hook latches on the connector and is secured to the plug connector. Confirm that the lead wire cannot be easily pulled out (see below).

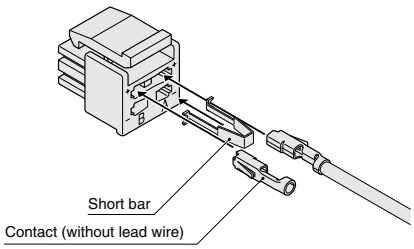
●Removing

To remove it, insert a tool with a fine tip (such as a small screwdriver) into the rectangular hole on the side of the plug connector to push up on the hook, and then pull out the lead wire. When re-using the contacts, restore the hook back so that they spread outward.



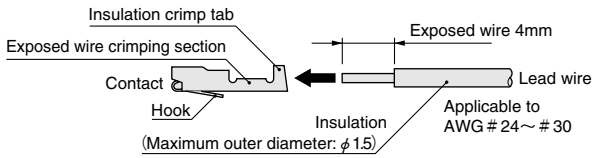
3. Common terminal and short bar

A short bar is attached to the plug connector to ensure that the solenoid A and B wiring are positive common. Do not remove the short bar.



4. Crimping of connecting lead wire and contact

To crimp lead wires into contacts, strip off 4mm [0.16in.] of the insulation from the end of the lead wire, insert it into the contact, and crimp it. Be sure to avoid catching the insulation on the exposed wire crimping section.



Cautions: 1. Do not pull hard on the lead wire.
2. For crimping of connecting lead wire and contact, always use a dedicated tool.
Contact: Model 706312-2MK Manufactured by Sumiko Tech, Inc.
Crimping tool: Model F1 (For 706312-2MK) Manufactured by Sumiko Tech, Inc.

5. Common connector assembly for manifolds

Using a common connector assembly for solenoid valves for a manifold provides common wiring for all the solenoid valves and greatly reduces wiring work.

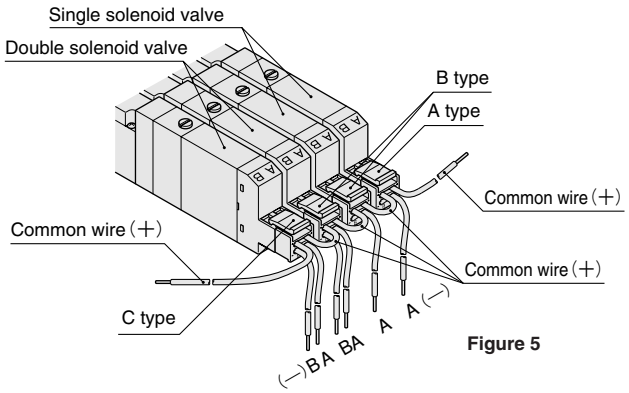
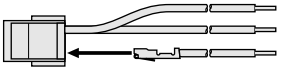


Figure 5

6. Common connector assembly (positive common specifications)

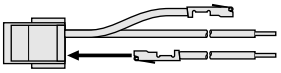
For adding units after mounting the connector assembly for the manifold, order the appropriate common connector assembly shown below.

A type Model : FZ-PA□※



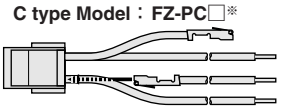
Red Common wire (+)
Black A side (−)
White B side (−) (Insert when using as a double solenoid)

B type Model : FZ-PB□※



Red Common wire (+)
Black A side (−)
White B side (−) (Insert when using as a double solenoid)

C type Model : FZ-PC□※

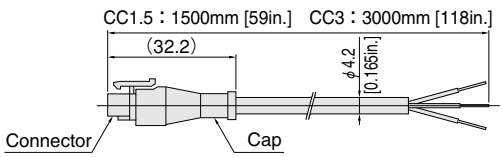


Red Common wire (+)
Black A side (−)
White B side (−) (Insert when using as a double solenoid)
Red Common wire (+)

Note: **FZ0-P□□** has no white wires. ※: Lead wire length
Blank: 300mm [11.8in.]
3: 3000mm [118in.]

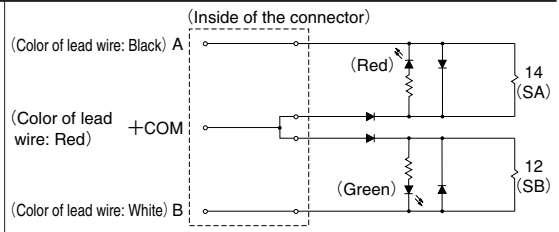
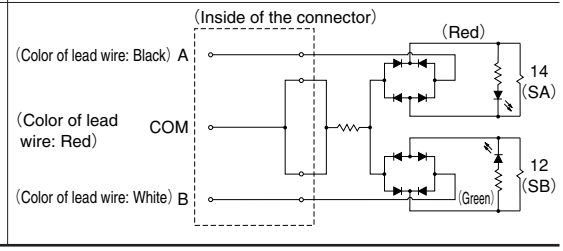
The common connector types are determined by looking at them from the lead wire side; the right end one is A type, the left end one is C type, and all the others are B type (see Fig. 5).

7. Cabtyre cable



Caution: Exercise caution that these are not dust-proof and drip-proof specifications.

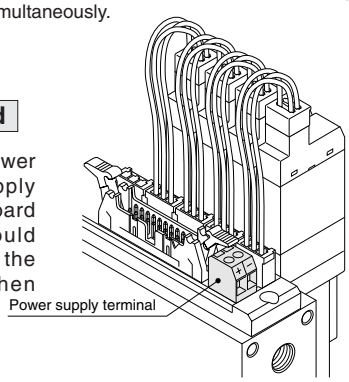
Internal circuit

Voltage specification	Internal circuit
DC24V DC12V	
AC100V	

Cautions: 1. Do not apply megger between the pins.
2. For switching wiring between a single solenoid and a double solenoid, see the "Wiring instructions" on p.505.
3. The common wiring set for the double solenoid with a DC specification is the positive common specification.
4. Leakage current inside the circuit could result in failure of the solenoid valve to return, or in other erratic operation. Always use at less than the allowable leakage current shown in the solenoid specifications on p.563, 581, and 599. If circuit conditions, etc. cause the leakage current to exceed the allowable leakage current, consult us.
5. For the double solenoid specification, avoid energizing both solenoids simultaneously.

PC board manifold

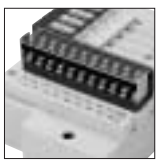
When connecting a power line to the power supply terminal on the PC board manifold, care should be taken in regard to the following points when connecting.



Terminal screw tightening torque: 0.4N·m {0.04kgf·m} [3.5in·lbf]
Stripped wire length: 7mm [0.28in.]
Connecting wire size: 0.13～2.5mm² [0.00020～0.00388in.²]
AWG: No.26...14

When planning to use crimp-style terminals, use bar terminals.
Recommended crimp-style terminals (bar terminals):
Manufactured by Nichifu, Inc.
Model BT1.25-9-1 (for 0.25～1.65mm² [0.00039～0.00256in.²])

Wiring of the terminal block



Care should be taken with the terminal screw tightening torque. Overtightening beyond the tightening torque could result in breakage.

Terminal screw tightening torque: Max. 49.0N·cm {5.0kgf·cm} [4.3in·lbf].

Precautions for use of the double solenoid

When using models **F□T1** or **F□T2** (2-position valve) as double solenoid valves, caution should be exercised as energizing the A side solenoid or pushing the manual override button on the A side, while pushing the B side manual override button or in a locked state, or energizing the solenoid on the B side, will cause the valve to switch over. (At that time, the valve will operate in the same state as the single solenoid valve.)

Manual override

Manual override button (locking and non-locking dual-use type)

To lock the manual override, use a small screwdriver to push down the manual override button all the way down and turn it clockwise 90 degrees. When locked, turning the manual override button 90 degrees in the counterclockwise direction, releases a spring on the manual override, returns it to its normal position, and releases the lock. To operate the unit in the same way as the non-locking type, leave the manual override button unturned.

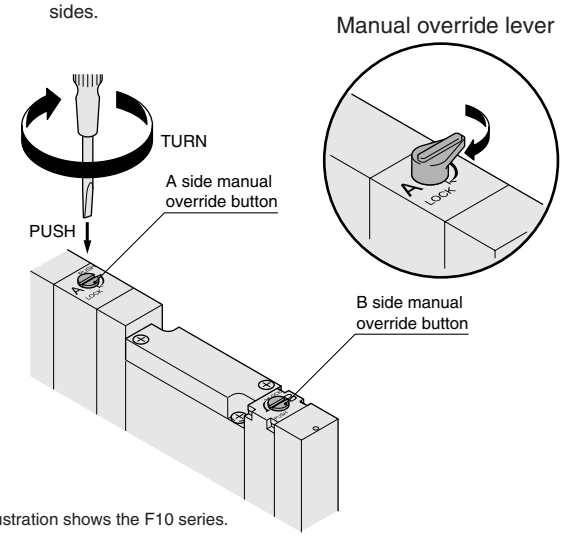
Cautions:
1. The F series valves are pilot type solenoid valves. As a result, the manual override cannot switch the main valve without air supplied from the 1(P) port (X(P2) port for external pilot type).
2. Always release the lock of the manual overrides before commencing normal operation. Caution should be exercised to release the lock of the manual override on the B side that operates as the switching button between the single solenoid and double solenoid. For details (excluding the 3-position valve), see "Switching from a double solenoid valve to a single solenoid valve" on p.505.
3. Do not attempt to operate the manual override button with a pin or other object having an extremely fine tip. It could damage the manual override button.
4. Take care to avoid excessive turning of the manual override, which could damage it.
5. When operating the solenoid valve's manual override for maintenance, etc. always confirm that the solenoid valve's override button has been restored to its normal position, and that the main valve is in the required switching position before restarting operations.

Manual override lever (locking and non-locking dual-use type)

(made to order)

To lock the manual override lever, use fingers to push the lever all the way down and turn it clockwise 90 degrees. When locked, turning the manual override lever 90 degrees in the counterclockwise direction, releases a spring on the manual override, returns it to its normal position, and releases the lock. To operate the unit in the same way as the non-locking type, leave the lever unturned.

Caution: Model **F□T1** (2-position valve) has a manual override lever on the A side, and a manual override button with cover on the B side.
Model **F□T2** has a manual override lever on the A side only, and a manual override button on the B side.
The 3-position valve has manual override lever on both the A and B sides.



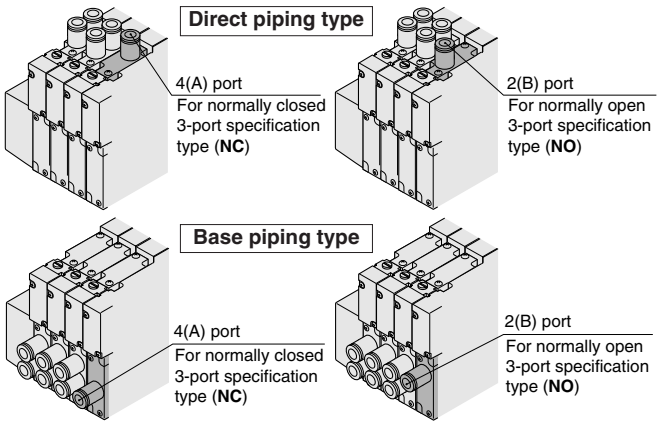
※ Illustration shows the F10 series.

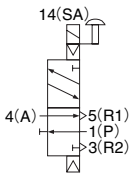
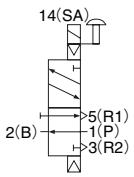
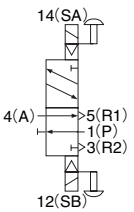
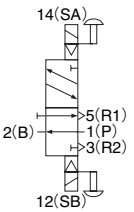
3-port valves

While the F series is a 5-port valve, it can be used as a normally closed (NC) or normally open (NO) 3-port valve by plugging one of either outlet port 4(A) or 2(B). In this case, leave the exhaust ports 3(R2) and 5(R1) open for use. It can also be used as a double solenoid type 3-port valve.

When using a 3-port single fitting block and female thread block

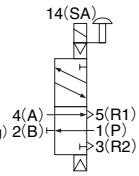
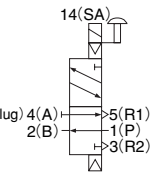
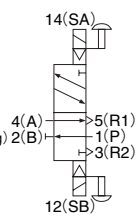
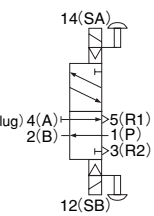
In the F10 and F15 series, a 3-port single fitting block and female thread block with 1 port plugged can be selected at the time of order. (Note: Not available for F18 series.)



Fitting type	-※※A	-※※B
Switching type	Normally closed (NC)	Normally open (NO)
For single solenoid setting		
For double solenoid setting		

When using a plug

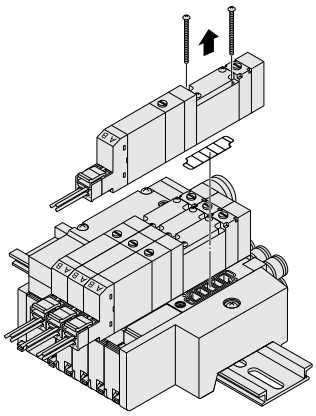
The F10, F15, and F18 series can be used as either a normally closed (NC) or normally open (NO) 3-port valve by plugging either outlet port 4(A) or 2(B).

Plug position	When the 2(B) port is plugged	When the 4(A) port is plugged
Switching type	Normally closed (NC)	Normally open (NO)
For single solenoid setting		
For double solenoid setting		

Manifold

Attaching and removing valves

To remove the valve body from the sub-base or manifold, loosen the valve mounting screws (2 places), and lift it up in the direction of the arrow (see the diagram at right). To install it, reverse the above procedure. The recommended tightening torques for the valve mounting screws are as shown below.



※Illustration shows the F10 series (split manifold).

N·cm{kgf·cm} [in·lbf]

Series	Recommended tightening torque
F10	17.6 {1.8} [1.6]
F15	49.0 {5.0} [4.3]
F18	49.0 {5.0} [4.3]

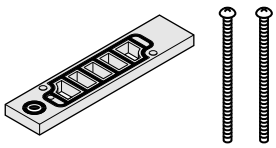
Sub-plate (service part)

A sub-plate is provided as a service part required for mounting new type valves on the earlier type of split manifold plug-in type, and the earlier type of serial transmission compatible manifold.
For details, see “Precautions for Use Due to Partial Specification Changes (Deliveries from January 30, 1997)” (p.521～522).

Sub-plate (sub-plate, gasket, O-ring, 2 mounting screws)

F □ Z - S

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width



Precautions for using manifold

Observe the following precautions when using the split type and serial transmission compatible manifold (except for the monoblock manifold and PC board manifold).

- When using the direct piping type manifold
  Avoid using valves at an operating frequency exceeding 2Hz, as such use can result in heat-related breakdowns.
- When using the base piping type manifold
  When plugs have been attached on the 4(A) and/or 2(B) ports, avoid using valves at an operating frequency exceeding 2Hz, as such use can result in heat-related breakdowns.

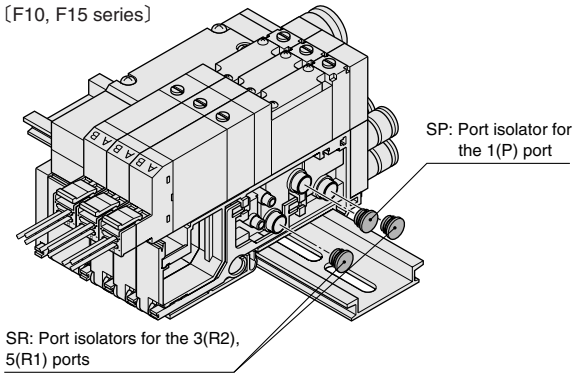
Port isolator

In the split manifold, installing port isolators to the 1(P), 3(R2) and 5(R1) ports between each station isolates the air path between stations equipped with port isolators and stations with smaller station numbers. However, a piping block must be placed on both ends.

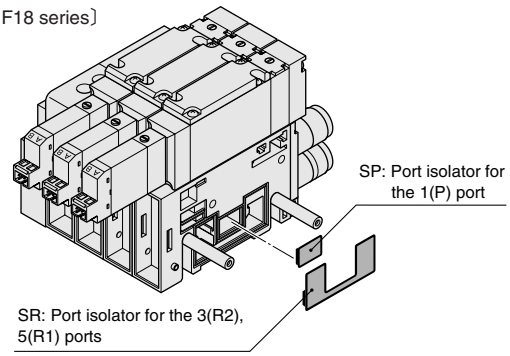
- Port isolator for the 1(P) port (Mode : **F□Z-SP**) —— Can supply two different pressures
- Port isolators for the 3(R2), 5(R1) ports (Model : **F□Z-SR**) —— Can isolate exhaust air (prevents exhaust interference)
- Port isolators for the 1(P), 3(R2), 5(R1) ports (Model : **F□Z-SA**) —— Can supply two different pressures, and can isolate exhaust air (prevents exhaust interference)

※□ denotes valve size.

〔F10, F15 series〕



〔F18 series〕



Caution: Installing port isolators requires the disassembly and re-assembly of manifolds. See the disassembly diagram, unit adding procedure, and cautions on p.511～516.
However, since the F18 series serial transmission compatible manifold cannot be disassembled, port isolators cannot be installed on it later.

Precautions for the use of individual air supply and exhaust spacers

By mounting an individual air supply or exhaust spacer on the manifold, the air supply or exhaust can be operated individually on the unit. Caution should be exercised when spacers are used, as the effective area is reduced by about 30%. If mounting additional spacers to an existing unit, observe the following items:

●Spacer mounting method (F10 series)

① Loosen the valve mounting screws where the individual air supply or exhaust spacer will be installed, and remove the valve.
② Install the gaskets and exhaust valve provided with the individual air supply or exhaust spacer, and use the mounting screws provided to secure the valve on the manifold (see Fig. 9).

Remark: When attaching fittings to the F10 spacer, use the recommended fittings shown below:
TSH4-M5M, TSH4-M5, TSH6-M5M, TS4-M50, TS4-M5M

●Spacer mounting method (F 15 and F18 series)

① Loosen the valve mounting screws where the individual air supply or exhaust spacer will be installed, and remove the valve.
② Open the cover of the manifold, and pull out the plug-in connector in the near side direction (for the plug-in type) (see Fig. 10).
③ Insert the plug-in connector firmly into the connector attaching section of the individual air supply or exhaust spacer, and then close the cover, while watching to ensure that the lead wires are not caught by the cover (for the plug-in type) (see Fig. 11).
④ Attach the gasket and exhaust valve provided with the individual air supply or exhaust spacer, and use the mounting screws provided to mount the valve on the manifold.

Cautions: **1.** Locations where the spacers are mounted make the valve height higher by the height of the spacer (see the dimensions below).
2. The F series split manifold plug-in type, and the serial transmission compatible manifold, have undergone partial specification changes, with the result that earlier and new types exist. A change in the shape of the connector receptacle means that it cannot be mounted on the earlier type manifold. Use the color of the cover to identify the new or earlier types (see Figs. 9 and 10).

Item \ Type	Earlier type manifold	New type manifold
Color of cover	Ivory	Light blue

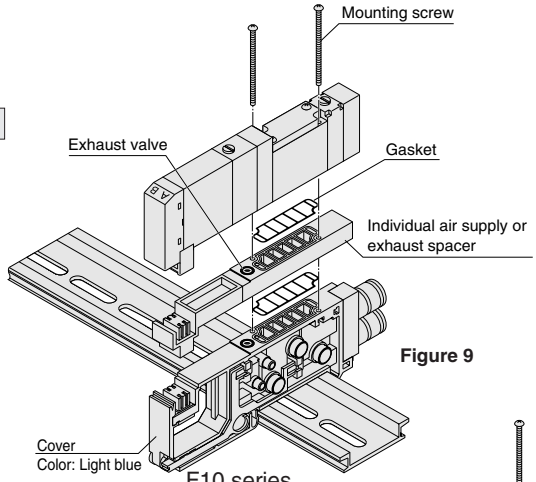


Figure 9

F10 series

(Illustration shows the split manifold plug-in type)

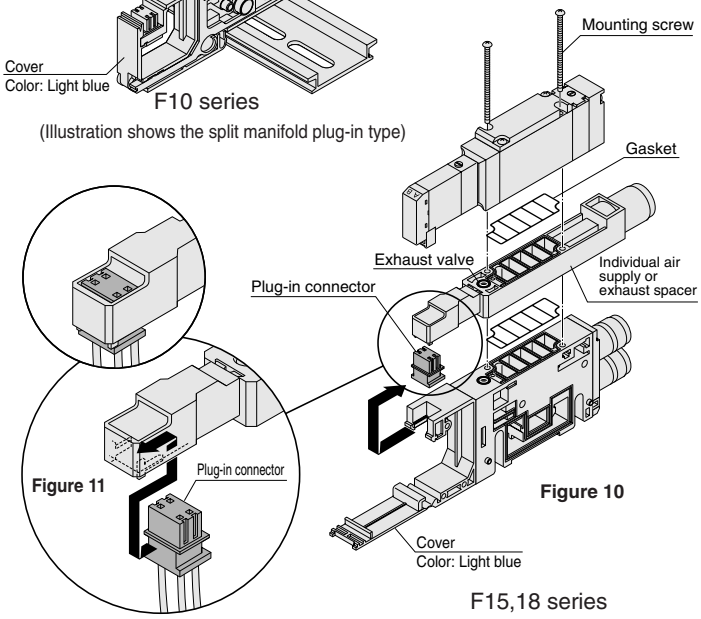


Figure 11

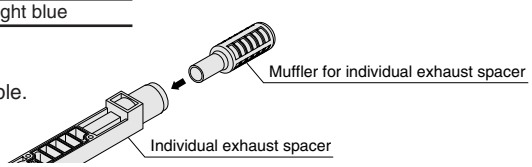
Figure 10

F15,18 series

(Illustration shows the split manifold plug-in type)

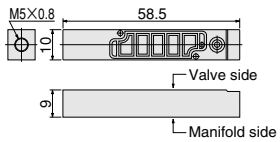
●Muffler for the individual exhaust spacer

A muffler for the individual exhaust spacer is available.
For the outer dimensions, see p.578, 596, and 613.

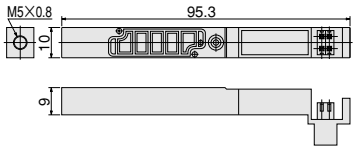


●Dimensions

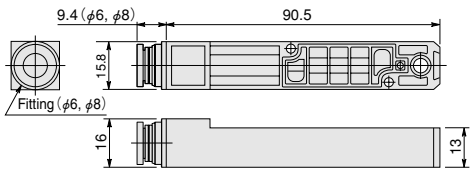
F10Z-N□□ (For F10 series) Mass 7g [0.25oz.]



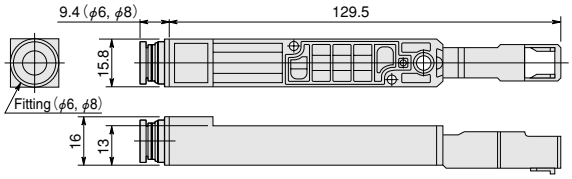
F10Z-P□□ (For F10 series) Mass 9g [0.32oz.]



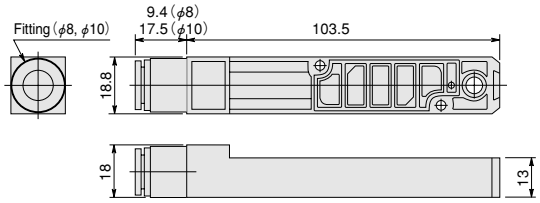
F15Z-N□□ (For F15 series) Mass 26g [0.92oz.]



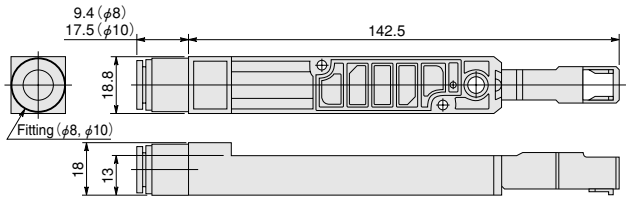
F15Z-P□□ (For F15 series) Mass 29g [1.02oz.]



F18Z-N□□ (For F18 series) Mass 41g [1.45oz.]



F18Z-P□□ (For F18 series) Mass 44g [1.55oz.]



Fitting

Piping

1. Procedure for switching between the base piping type and the direct piping type

Base piping and direct piping can be switched by replacing the plate with a fitting block or a female thread block (see Fig. 6).

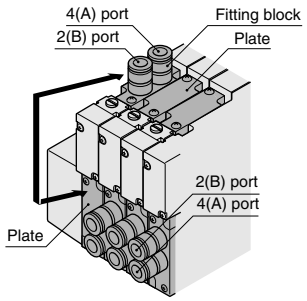


Figure 6

※Diagram shows the F10 series.

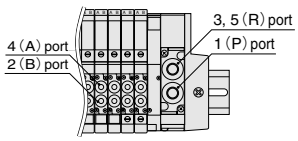
Cautions: 1. Firmly tighten the screws after completing a re-combination. Recommended tightening torques are shown below.
2. Install piping carefully in regards to the locations of each connection port (see Figs. 7, 8).
3. Care should be taken not to lose the gaskets while changing plates.

N·cm{kgf·cm} [in·lbf]

Series	Recommended tightening torque
F10	17.6 {1.8} [1.6]
F15	49.0 {5.0} [4.3]
F18	49.0 {5.0} [4.3]

●Direct piping type

For **F10**, **F15** series



※Diagram shows the F10 series.

For **F18** series

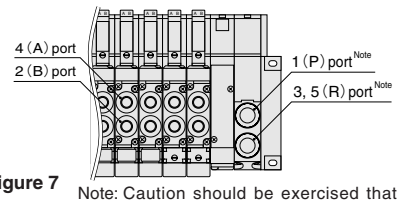


Figure 7

Note: Caution should be exercised that the positions of the 1(P) and 3, 5(R) ports are reversed from their positions in the F10 and F15 series.

●Base piping type

Port locations for **F10**, **F15**, **F18** series are as shown in Fig. 8.

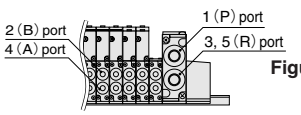


Figure 8

※Diagram shows the F10 series.

2. Attaching fittings to female thread blocks

When attaching fittings to female thread blocks, fasten with the tightening torques shown below or less.

Screw size	Tightening torque N·cm {kgf·cm} [in·lbf]
Rc 1/8	686 {70} [61]
Rc 1/4	882 {90} [78]

※For M5, tighten at the torques recommended for the fittings used.

3. Attaching fittings to piping blocks〔F18Z(G)-PM(P)〕

To attach fittings to the female thread type piping block of the F18 series, remove the piping block portion (the triangular-shaped block portion), screw the fittings into the 1(P) and 3, 5(R) ports while holding the piping block by applying a wrench to its metal portion. The tightening torque for the mounting (two M3 screws) of the piping block portion after the fittings have been attached should be 49.0 N·cm {5.0kgf·cm} [4.3in·lbf.].

Dual-use different size fittings (With different size fitting blocks)

The F series different size fitting blocks employ dual-use fittings for different tube sizes, which can connect tubes of 2 different outer diameters.

●Attaching and removing tubes

When connecting tubes, insert an appropriate size tube until it contacts the tube stopper, and then lightly pull it to check the connection.
For tube removal, push the tube against the tube stopper, then for large tube sizes, push on the release ring and at the same time pull the tube out. For small tube sizes, push on the outer ring by the release ring and simultaneously pull the tube out (see Fig. 12).

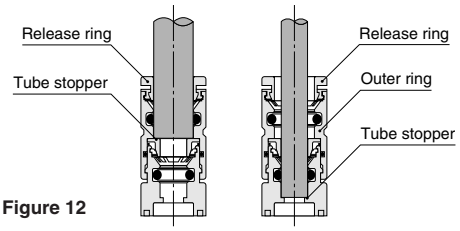


Figure 12

Large tube size **Small tube size**

Usable tubes

Either a nylon or urethane tube can be used.
Use tubes with an outer diameter tolerance within ±0.1mm [0.004in.] of the nominal diameter, and ensure the ovalness (difference between the large diameter and small diameter) is 0.2mm [0.008in.] or less.
(Using a Koganei tube is recommended.)

Cautions: 1. Do not use extra-soft tubes since their pull-out strength is significantly reduced.
2. Only use tubes without scratches on their outer surfaces. If a scratch occurs during repeated use, cut off the scratched portion.
3. Do not bend the tube excessively near the fittings.The minimum bending radius is as shown in the table below.
4. When attaching or removing tubes, always stop the air supply. In addition, always confirm that air has been completely exhausted from the manifold.

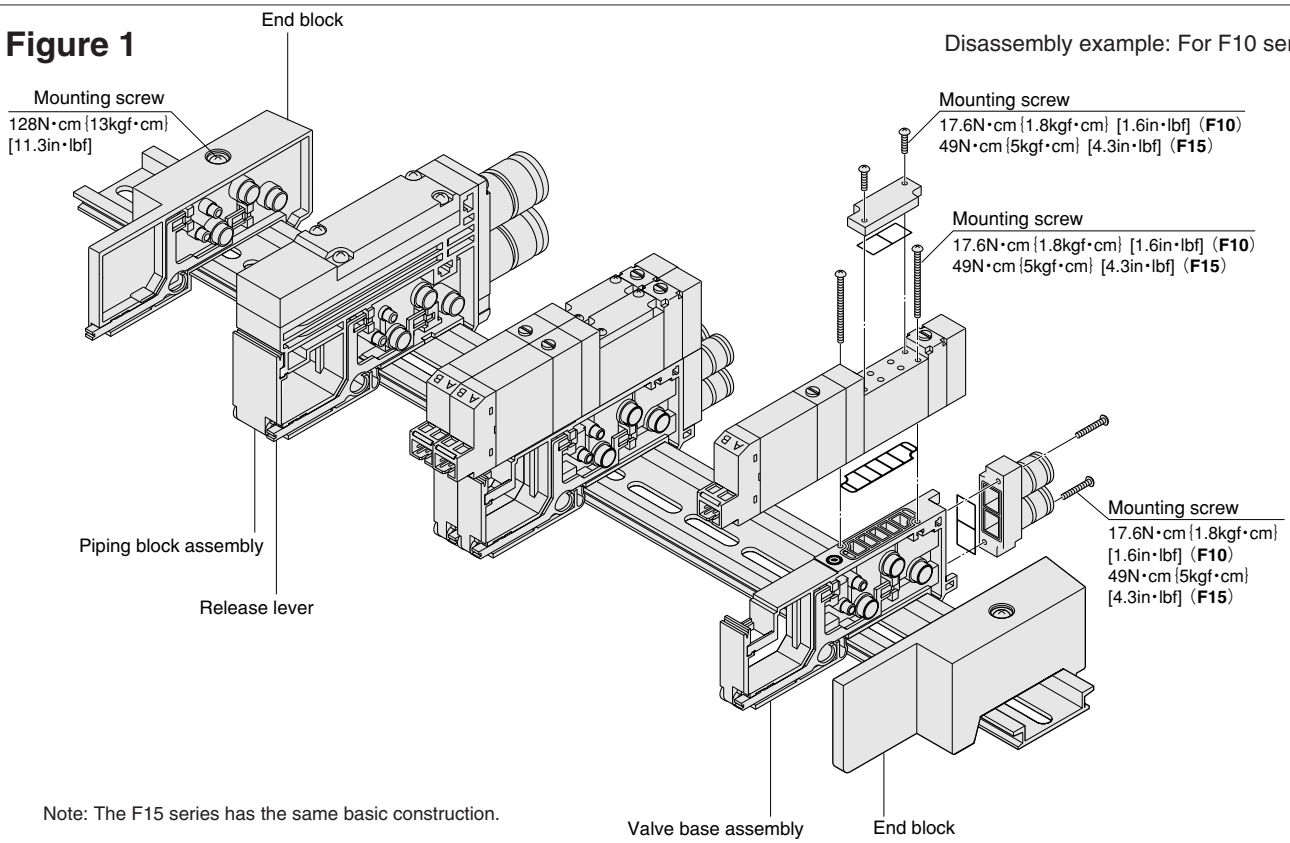
mm [in.]

Tube size	Minimum bend radius
ϕ 4	20 [0.8]
ϕ 6	30 [1.2]
ϕ 8	50 [2.0]
ϕ 10	80 [3.1]

F10 and F15 Series Disassembly Diagram of Split Manifold Non-Plug-in Type

Figure 1

Disassembly example: For F10 series



Note: The F15 series has the same basic construction.

Manifold Unit Adding Procedure (F10 and F15 Series Non-Plug-in Type)

■Adding a valve base unit

Use the valve base assembly for adding valve base units.

① Loosen the mounting screw on the end block until it can slide (see Fig. 1).

Note: For the F15 series, loosen the mounting screws on both the left and right end blocks (3 screws each).

② Press the release lever on the valve base assembly where the new unit is to be added, and disconnect the link between the bases.

③ Mount the valve base assembly to be added on the DIN rail as shown in Fig. 2.

④ Return the release lever of the valve base assembly disassembled in step ② to its normal position, as shown in Fig. 3. In addition, set the release lever for the valve assembly being added to the same position, then press the bases together until they connect and click into place.

⑤ Press the bases together from both sides to ensure that there is no gap between them, and then tighten the end block mounting screws, and install the units in place on the DIN rail (see Fig. 5). Tightening torque: 128N·cm {13kgf·cm} [11.3in·lbf]

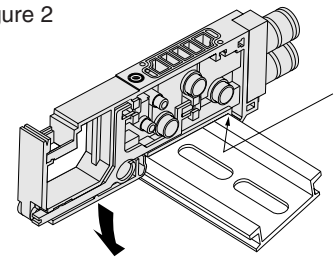
Notes: 1. Always follow the steps shown in Fig. 4 when tightening the end block mounting screws for the F15 series.
2. Confirm that the DIN rail mounting hooks secure the DIN rail (see Fig. 5).

【Caution】

- Always cut off the power and air supply before working. In addition, always confirm that air has been completely exhausted from the manifold.
- Care should be exercised to prevent the gasket from becoming caught or lost.
- Before supplying air to the manifold, always confirm that the bases are connected, the end block mounting screws are tightened, etc. Supplying air when either of the end blocks is not secured to the DIN rail could result in air leaks or in separation of manifold bases.
- When there are a large number of valves simultaneously delivering air to the secondary side, or when there is a large number of valves overall, we recommend using 2 air supplies and exhausts (on each side).

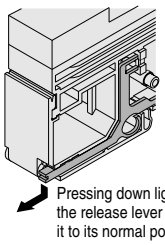
Adding units to the piping block assembly should be performed in the same way as adding units to the valve base assembly.

Figure 2



First let the hook latch onto this side, and then press down the base to secure it onto the DIN rail.

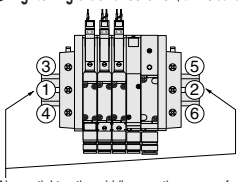
Figure 3



Pressing down lightly on the release lever will return it to its normal position.

Figure 4

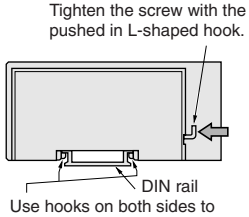
●Tightening order of screws (for F15 series only)



Always tighten the middle mounting screw of each end block first.
Tightening torque: 128N·cm {13kgf·cm} [11.3in·lbf]

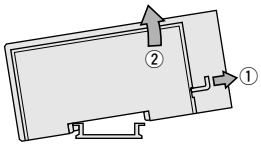
Figure 5

●Securing the end block in place



Use hooks on both sides to secure the DIN rail in place.

●Removing the end block from the DIN rail

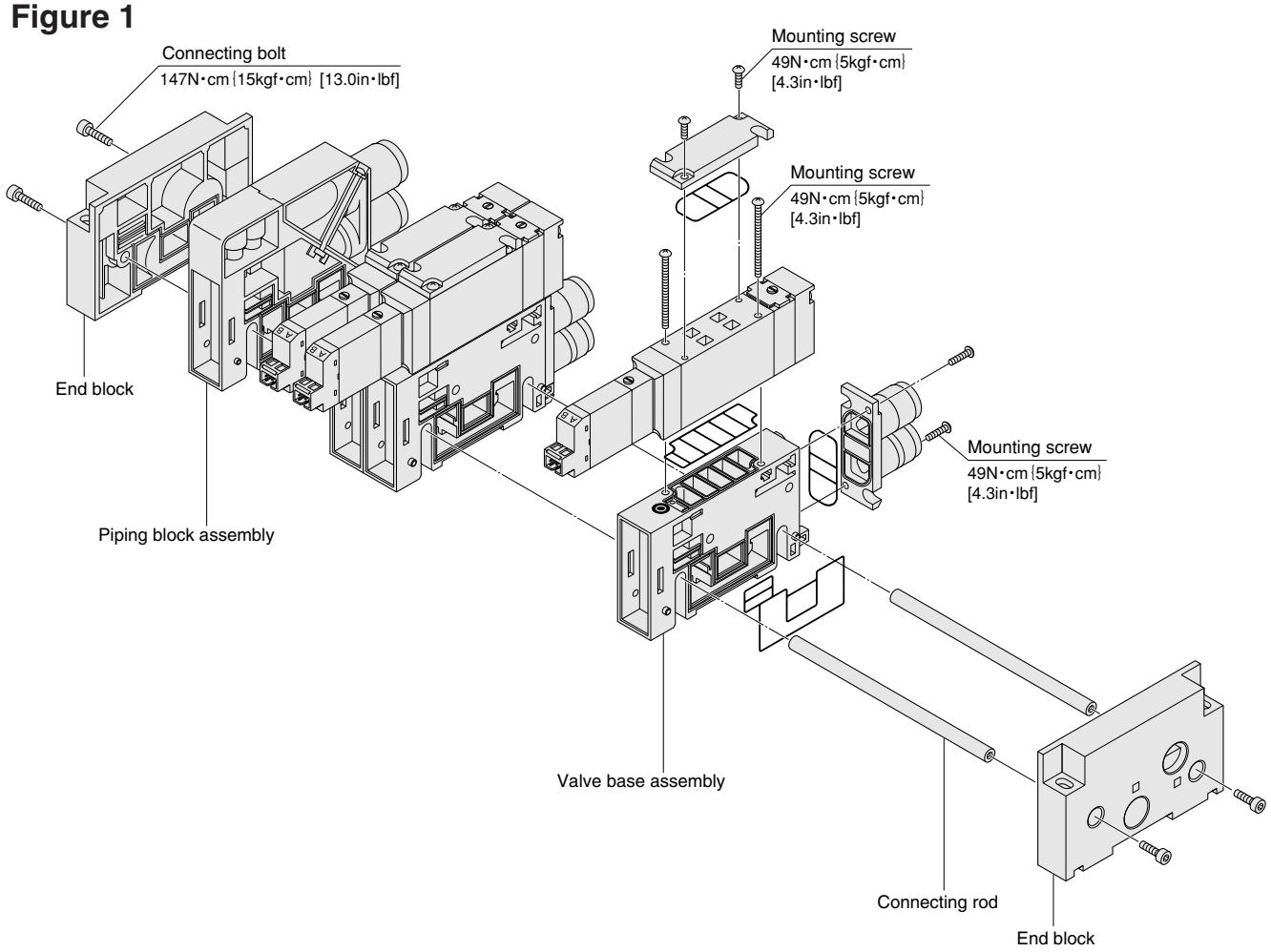


For mounting, follow in reverse the steps taken for removal.

Caution: The new end block for the F10 series does not include an L-shaped hook. To remove the end block from the DIN rail, loosen the end block mounting screws, and lift it off. (The switch to the new type commenced in October 2000)

F18 Series Disassembly Diagram of Split Manifold Non-Plug-in Type

Figure 1



Manifold Unit Adding Procedure (F18 Series Non-Plug-in Type)

■Adding a valve base unit

Use the valve base assembly and unit-adding connecting rod to add valve base units.

① Remove the connecting bolts on the end block and separate the end block from the manifold (see Fig. 1).

② Install the connecting rods to be added, open up the spaces where the units are being added, position the gaskets onto the valve base assemblies being added, and fit the units on the connecting rods from above. At this time, securely mount the units so that no gap is left between the added valve base assemblies and the upper surface of the connecting rods.

③ Install gaskets onto the end blocks removed in step ①, and retighten the connecting bolts. At this time, use a hexagon bar wrench to hold the connecting bolts on the opposite side in place so as to prevent the bolts from slipping while securing them into place. Tightening torque: 147N·cm {15kgf·cm} [13.0in·lbf]

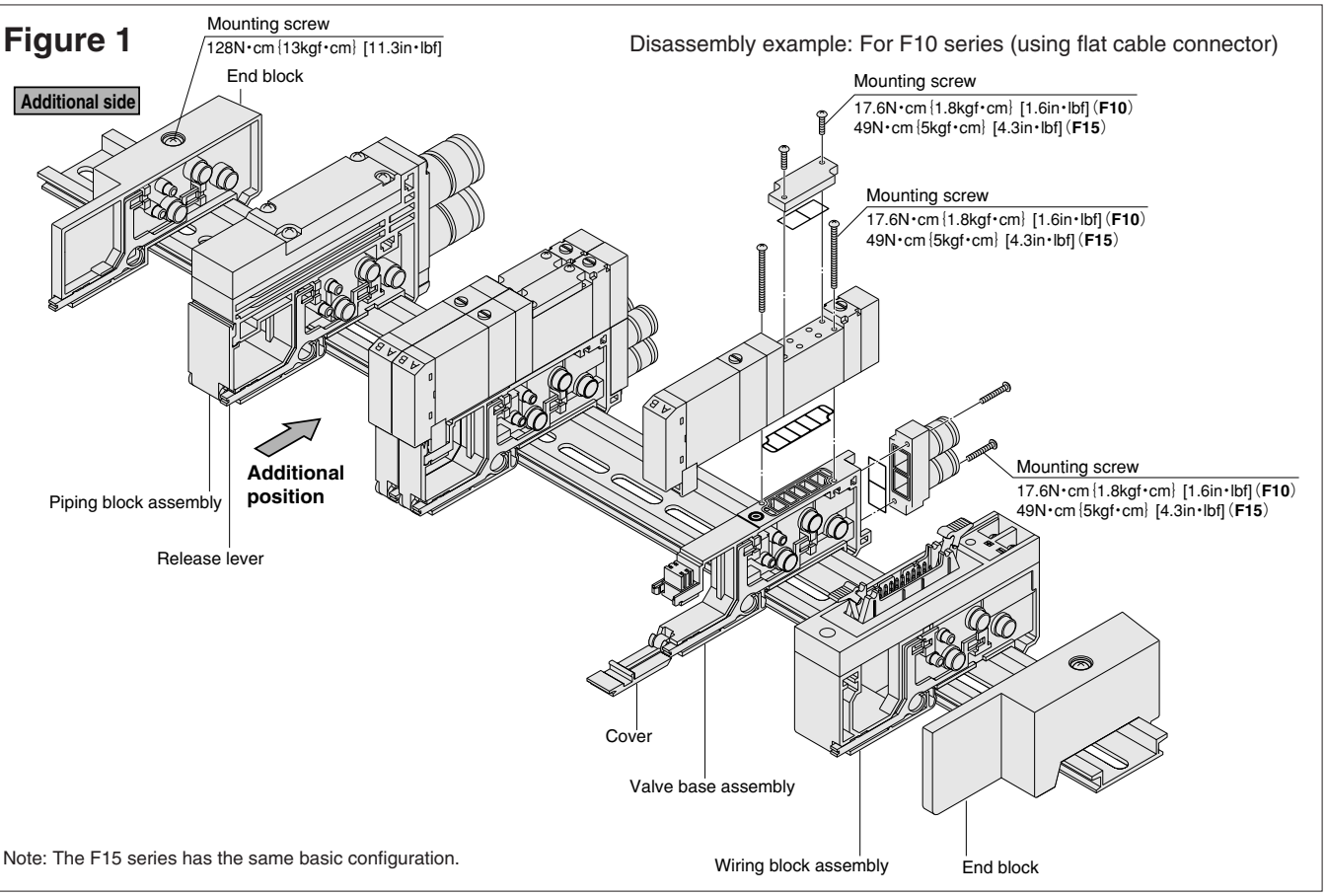
【Caution】

- Always cut off power and air supply before working. In addition, always confirm that air has been completely exhausted from the manifold.
- Care should be exercised to prevent the gasket from becoming caught or lost.
- Before supplying air to the manifold, always confirm that the bases are securely connected, the end block connecting bolts on both sides are tightened, etc. Supplying air when either of the end blocks is not secured to the DIN rail could result in air leaks or in separation of manifold bases.
- When there are a large number of valves simultaneously delivering air to the secondary side, or when there is a large number of valves overall, we recommend using 2 air supplies and exhausts (on each side).

Adding units to the piping block assembly should be performed in the same way as adding units to the valve base assembly.

F10 and F15 Series Disassembly Diagram of Split Manifold Plug-in Type

Figure 1



Note: The F15 series has the same basic configuration.

Manifold Unit Adding Procedure (F10 and F15 Series Plug-in Type)

■Adding a valve base unit

Use the valve base assembly for adding valve base units.

① Loosen the mounting screw on the end block until it can slide (see Fig. 1).

Note: For the F15 series, loosen the mounting screws on both the left and right end blocks (3 screws each).

② Add units on the additional side shown in Fig. 1 (with the solenoid on top and the right). To split up at additional unit locations, push the piping base assembly's release lever, and release the connections between the bases.

③ Mount the valve base assembly to be added on the DIN rail as shown in Fig. 2.

④ Return the release lever of the piping block assembly disassembled in step ② to its normal position, as shown in Fig. 3. Set the release levers on the additional valve bases in the same position, and press all the bases together until they click into place, while watching to ensure that the lead wires are not caught by the cover.

⑤ Press the bases together from both sides to ensure that there is no gap between them, and then tighten the end block mounting screws, and install the units in place on the DIN rail (see Fig. 5). Tightening torque: 128N·cm {13kgf·cm} [11.3in·lbf]

Notes: 1. Always follow the steps shown in Fig. 4 when tightening the end block mounting screws for the F15 series.
2. Confirm that the DIN rail mounting hooks secure the DIN rail (see Fig. 5).

Figure 2

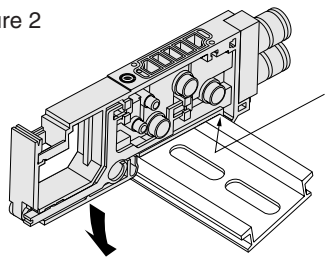


Figure 3

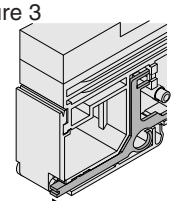
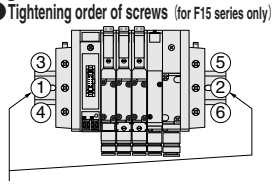


Figure 4

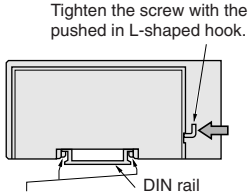
●Tightening order of screws (for F15 series only)



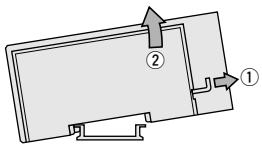
Always tighten the middle mounting screw of each end block first.
Tightening torque: 128N·cm {13kgf·cm} [11.3in·lbf]

Figure 5

●Securing the end block in place



●Removing the end block from the DIN rail



For mounting, follow in reverse the steps taken for removal.

Caution: The new end block for the F10 series does not include an L-shaped hook.To remove the end block from the DIN rail, loosen the end block mounting screws, and lift it off. (The switch to the new type commenced in October 2000)

■Wiring Procedure

① Use a flatblade screwdriver to open all of the covers (see Fig. 1). Loosen the mounting screws of the valve next to the valve base to be added, remove the valve, and remove the plug-in connector (see Fig. 6).

② The end terminal lead wire (short red wire) is inserted into the pin insert section (No.3) of the plug-in connector that was removed in step ① (see Fig. 7).
(When shipping, end terminal lead wire is inserted into the plug-in connector of the end unit valve.) Remove this end terminal lead wire, and insert it into the insert section (No.3) of the plug-in connector for the valve base assembly to be added. Next, insert the common wire (red) of this plug-in connector into the insert section (No.3) of the removed plug-in connector.

Note: When inserting the lead wire, confirm that the short bar of the plug-in connector's common wire insert section has been attached.

③ Install each of the wired plug-in connectors in step ② to the valve base, and mount the valve.

④ Remove the wiring block mounting screws and place the connector bracket in the position shown in Fig. 8, then connect the lead wire (white) of the added valve base after confirming the pin locations. (For details, see the "Detailed diagram of wiring block internal connections" on p.517)

⑤ Return the connector bracket to its original position, tighten the wiring block mounting screws in place, and then install the cover while exercising caution that the lead wires are not trapped by the cover.

【Caution】

- Always cut off the power and air supply before working. In addition, always confirm that air has been completely exhausted from the manifold.
- When removing lead wires from the plug-in connector, use a tool with a fine tip (such as a small screwdriver) to press lightly on the contact hook from a hole on the side of the plug-in connector, and pull out the lead wire. When re-inserting the lead wire to the connector, spread the contact hooks so that they face outward, and then insert the lead wire into the plug-in connector. At this time, pull the lead wire lightly to confirm that it is securely inserted.
- Always connect the end terminal lead wires (see Fig. 7).
- Care should be exercised to prevent the gasket from becoming caught or lost.
- Before supplying air to the manifold, always confirm that the bases are connected, the end block mounting screws are tightened, etc. Supplying air when either of the end blocks is not securing the DIN rail could result in air leaks or in separation of manifold bases.
- Caution should be exercised as the number of valve units that can be added is limited in the manifold, by the wiring specifications and wiring connection types, etc. For details, see the "Table for maximum number of valve units by wiring specification," on p.543.
- When there are a large number of valves simultaneously delivering air to the secondary side, or when there is a large number of valves overall, we recommend using 2 air supplies and exhausts (on each side).

  Adding units to the piping block assembly should be performed in the same way as adding units to the valve base assembly. In addition, when the wiring block and piping block are mounted side-by-side, always mount the wiring block on the outside of the piping block, for structural reasons.

Valve tightening torque N·cm {kgf·cm} [in·lbf]

Series	Torque
F10	17.6 {1.8} [1.6]
F15	49.0 {5.0} [4.3]

Figure 6

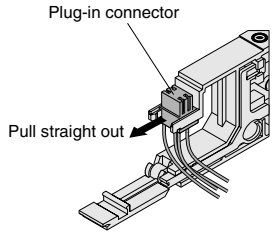
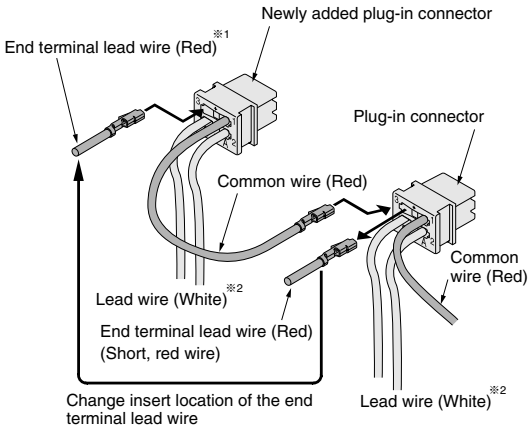
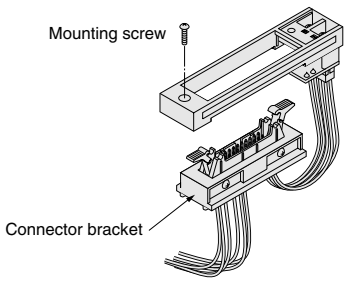


Figure 7



※1: Always insert end terminal lead wire.
※2: Shows when both A and B are used.

Figure 8

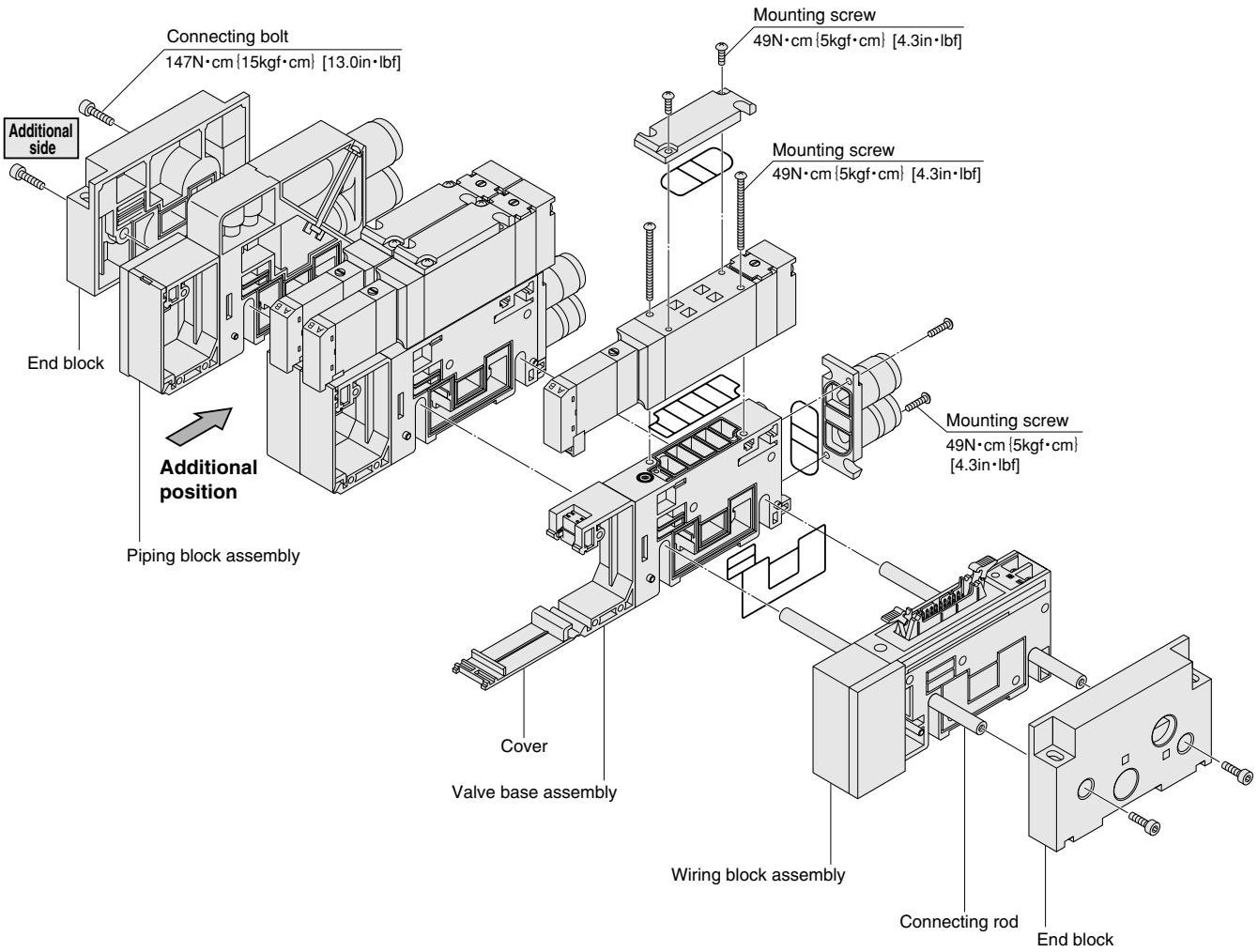


See "Detailed Diagram of Wiring Block Internal Connections" on p.517.

F18 Series Disassembly Diagram of Split Manifold Plug-in Type

Figure 1

Disassembly example: For mounted flat cable connector



Manifold Unit Adding Procedure (F18 Series Plug-in Type)

■Adding a valve base unit

Use the valve base assembly for adding valve base units.

① Remove the connecting bolts on the additional side end block and separate the end block from the manifold (see Fig. 1).

② Install the connecting rods to be added, open up spaces where the units are being added, position the gaskets onto the valve base assemblies being added, and fit the units on the connecting rods from above. At this time, securely mount the units so that no gap is left between the added valve base assemblies and the upper surface of the connecting rods.

③ Install gaskets onto the end blocks removed in step ①, and retighten the connecting bolts. At this time, use a hexagon bar wrench to hold the connecting bolts on the opposite side in place so as to prevent the bolts from slipping while securing them into place. Tightening torque: 147N·cm {15kgf·cm} [13.0in·lbf]

■Wiring Procedure

① Use a flatblade screwdriver to open all of the covers (see Fig. 1). Loosen the mounting screws of the valve next to the valve base to be added, remove the valve, and remove the plug-in connector (see Fig. 2).

② The end terminal lead wire (short red wire) is inserted into the pin insert section (No.3) of the removed plug-in connector that was removed in step ① (see Fig. 3).
(When shipping, end terminal lead wire is inserted into the plug-in connector of the end unit valve.) Remove this end terminal lead wire, and insert it into the insert section (No.3) of the plug-in connector for the valve base assembly to be added. Next, insert the common wire (red) of this plug-in connector into the insert section (No.3) of the removed plug-in connector.

Note: When inserting the lead wire, confirm that the short bar of the plug-in connector's common wire insert section has been attached.

③ Install each of the wired plug-in connectors in step ② to the valve base, and mount the valve.

④ Remove the wiring block mounting screws and place the connector bracket in the position shown in Fig. 4, then connect the lead wire (white) of the added valve base after confirming the pin locations (For details, see the "Detailed diagram of wiring block internal connections" on p.517).

⑤ Return the connector bracket to its original position, tighten the wiring block mounting screws in place, and then install the cover while exercising caution that the lead wires are not trapped by the cover.

【Caution】

- Always cut off the power and air supply before working. In addition, always confirm that air has been completely exhausted from the manifold.
- When removing lead wires from the plug-in connector, use a tool with a fine tip (such as a small screwdriver) to press lightly on the contact hook from a hole on the side of the plug-in connector, and pull out the lead wire. When re-inserting the lead wire to the connector, spread the contact hooks so that they face outward, and then insert the lead wire into the plug-in connector. At this time, pull the lead wire lightly to confirm that it is securely inserted.
- Always connect the end terminal lead wire (see Fig. 3).
- Care should be exercised to prevent the gasket from becoming caught or lost.
- Before supplying air to the manifold, always confirm that the bases are connected, the end block connecting bolts on both sides are tightened, etc.
  Supplying air when either of the end blocks is not securing the DIN rail could result in air leaks or in separation of manifold bases.
- Caution should be exercised as the number of valve units that can be added is limited in the manifold, by the wiring specifications and wiring connection types, etc. For details, see the "Table for maximum number of valve units by wiring specification," on p.543.
- When there are a large number of valves simultaneously delivering air to the secondary side, or when there is a large number of valves overall, we recommend using 2 air supplies and exhausts (on each side).

  Adding units to the piping block assembly should be performed in the same way as adding units to the valve base assembly. In addition, when the wiring block and piping block are mounted side-by-side, always mount the wiring block on the outside of the piping block, for structural reasons.

Valve tightening torque N·cm {kgf·cm} [in·lbf]

Series	torque
F18	49.0 {5.0} [4.3]

Figure 2

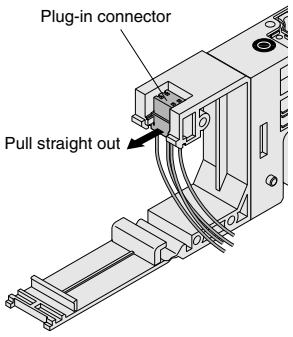
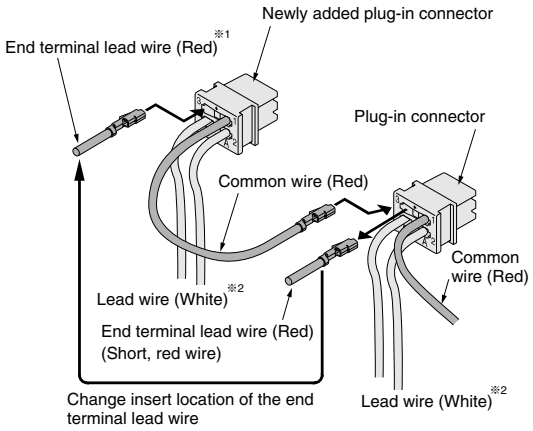
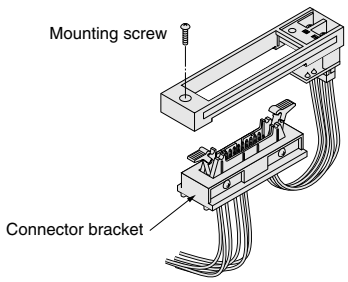


Figure 3



※1: Always insert end terminal lead wire.
※2: Shows when both A and B are used.

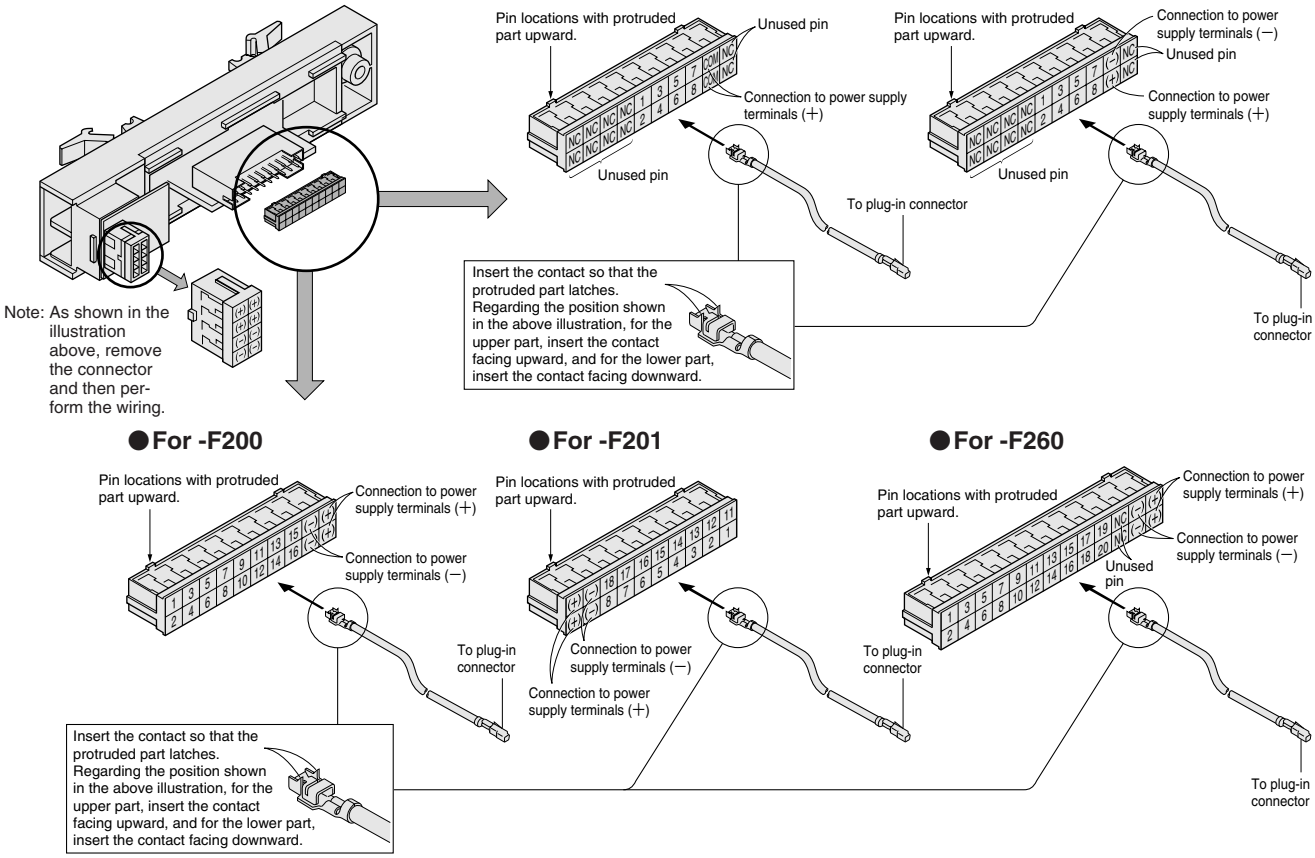
Figure 4



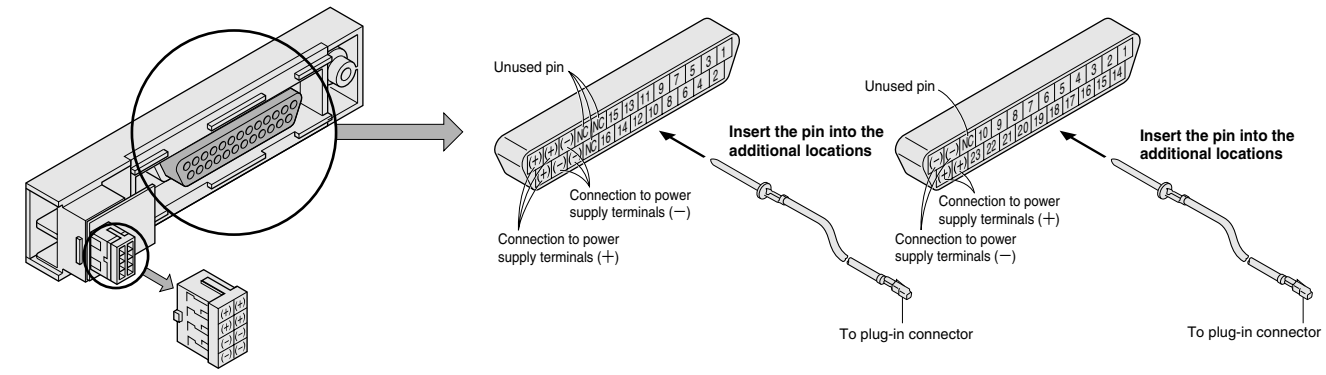
See "Detailed Diagram of Wiring Block Internal Connections" on p.517.

Detailed Diagram of Wiring Block Internal Connections

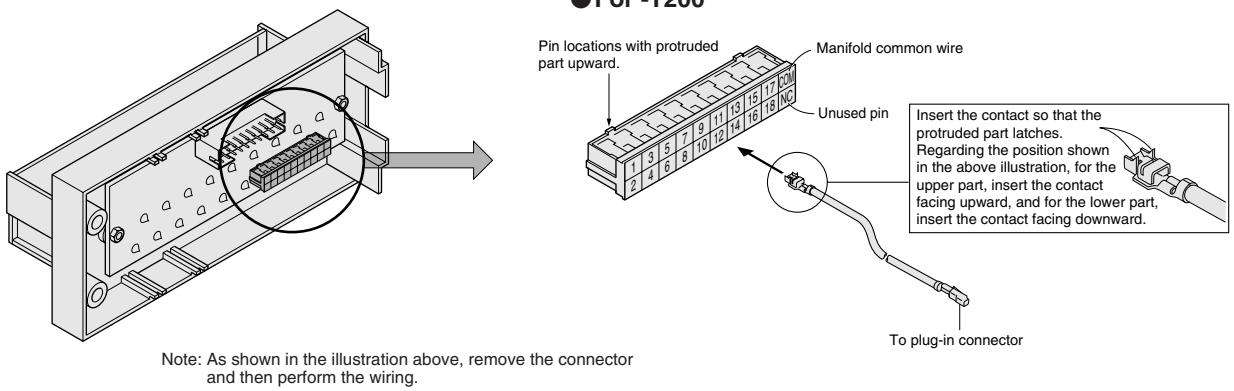
Flat cable connector 10, 20, 26 pins



D-sub connector



Terminal block

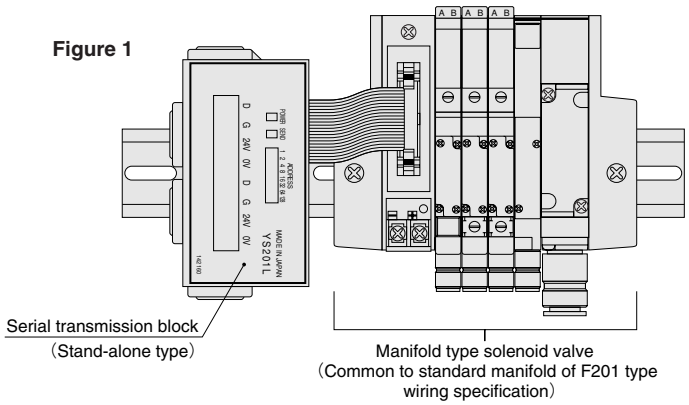


Product Configurations for the F Series Serial Transmission Compatible Manifold

When ordering the serial transmission compatible manifold, note that the product configurations vary between the F10 and F15 series, and the F18 series.

■For F10 and F15 series

Figure 1



●The manifold body and serial transmission block are connected by a flat cable, and mounted on one DIN rail at shipping.

Serial Transmission Block, Single Unit

YS2□L (For stand-alone, left-side mounting)※
YS2□R (For stand-alone, right-side mounting)※
YS391 (For OMRON CompoBus/D)Note

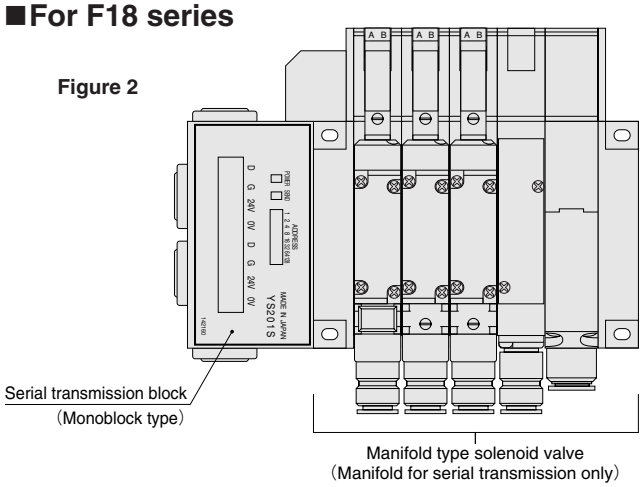
※: About 100mm [3.9in.] of a flat cable with a connector is provided with the serial transmission block.

Note: The transmission block uses OMRON's remote I/O adapter-type DRT1-OD16X, and therefore differs in shape from other transmission blocks.

Illustration shows the F10 series.

■For F18 series

Figure 2



●The serial transmission block is mounted to the manifold at shipping.

Serial Transmission Block, Single Unit

YS2□S (For monoblock, left-side mounting)※
YS2□T (For monoblock, right-side mounting)※
YS391 (For OMRON CompoBus/D)Note

※: Cables, etc. are not provided with the serial transmission block.

Note: The transmission block uses OMRON's remote I/O adapter-type DRT1-OD16X, and therefore differs in shape from other transmission blocks.

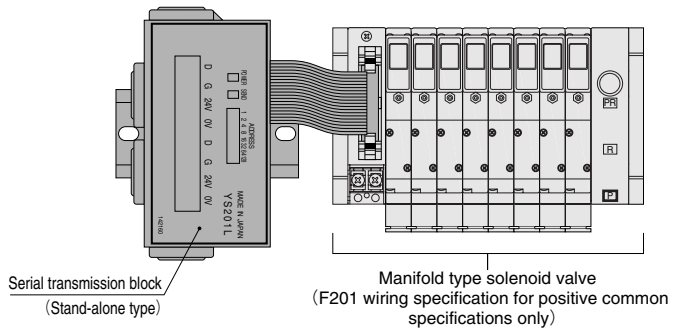
■Application Examples for Serial Transmission Block, Single Unit (for reference)

If manifolds with flat cable connectors purchased in the past have F201 wiring specifications (with positive common specifications only), the serial transmission blocks (stand-alone type) **YS2□L, YS391** or **YS2□R** in Figure 1 can be connected to the manifold to convert it into a serial transmission-compatible manifold.

●Connectable Manifolds

- FM-SOLID MANIFOLD X80M and X88M Series
- Solenoid valves F series (F10 and F15 series are the same, with the exception of the above-described manifold and DIN rail.)

●Connection example between a serial transmission block (stand-alone type) and an earlier type of manifold



Serial Transmission Block, Single Unit

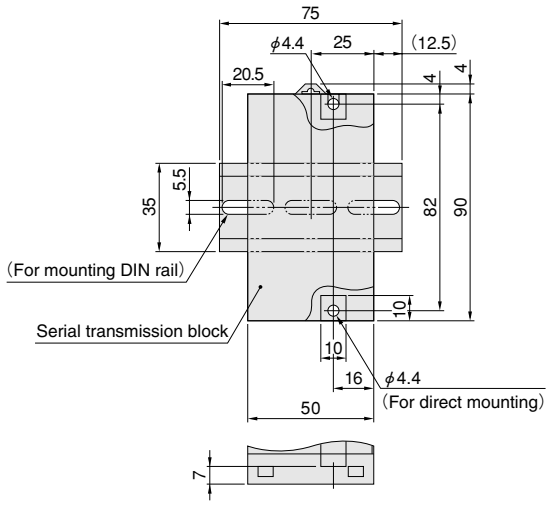
YS2□L (For stand-alone, left-side mounting)※
YS2□R (For stand-alone, right-side mounting)※
YS391 (For OMRON CompoBus/D)Note

※: Flat cable with connector is provided with the serial transmission block.

Note: The transmission block uses OMRON's remote I/O adapter-type DRT1-OD16X, and therefore differs in shape from other transmission blocks.

Mounting dimensions for a serial transmission block, single unit (mm)

When ordering **YS2□L** or **YS2□R** as a single unit, a DIN rail is included.



Specifications of Serial Transmission Compatible Manifold

General Specifications

Voltage	DC24V ±10%
Operating temperature range	5～50°C [41～122°F]
Vibration resistance	49.0m/s² {5.0G} (Conforms to JIS C 0911)
Shock resistance	98.1m/s² {10.0G} (Conforms to JIS C0912)

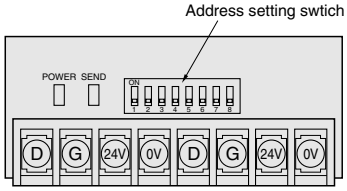
●For details about specifications, see each user's manual (see below).

Note: The internal wiring for the F10 and F15 series on the manifold side is the same as the wiring specification **-F201** of the split-type manifold plug-in type (flat cable connector type).

Serial Transmission Block, Terminal Block (LED) Part Names

●For UNI-WIRE® System

Transmission block specification: **-01** (16 outputs), **-02** (8 outputs)



LED indicator

Indicator	Description
POWER	•Lights up when power is turned on •Flashes during voltage drops or when over current (a short circuit)
SEND	•Flashes during normal transmission •Lights up or shuts off during faulty transmission

Remarks

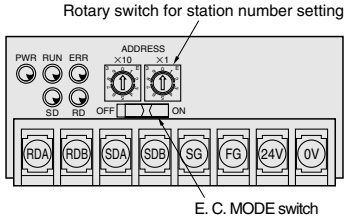
※The UNI-WIRE® System is a serial parallel transmission system developed jointly by NKE and KURODA PRECISION INDUSTRIES. For details of the UNI-WIRE System, see the NKE or KURODA PRECISION INDUSTRIES catalog, user's manual, etc.

● Number of outputs per block
16 solenoids (transmission block specification: **-01**)
8 solenoids (transmission block specification: **-02**)

● Related materials: User's manual, document No. **HV005**

●For Mitsubishi Electric MELSECNET/MINI-S3

Transmission block specification: **-11**



LED indicator

Indicator	Description
PWR	•Lights up when power is turned on
RUN	•Lights up for normal data communication with master station
SD	•Flashes during sending data
RD	•Flashes during receiving data
ERR	•Lights up when data receiving error occurs, shuts off for normal communication

Remarks

● Master station: MELSEC-A series
AJ71PT32-S3, AJ71T32-S3, A2CCPU/A2CJCPU, A1SJ71PT32-S3, link sub-stations up to a maximum of 64 stations, and link I/O numbers up to a maximum of 512.

※For details, see the Mitsubishi Electric's sequencer MELSEC-A series catalog, user's manual, etc.

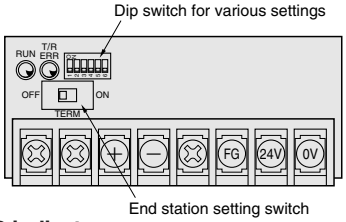
● Number of outputs per block
Maximum of 16 solenoids

※Since the block is equivalent to 2 stations, if sub-stations are entirely composed of the blocks, the maximum becomes 32 units.

● Related materials: User's manual, document No. **HV006**

●For OMRON SYSBUS Wire System

Transmission block specification: **-21**



LED indicator

Indicator	Description
RUN	•Lights up when transmission is normal, and the PC is in operations mode or monitor mode
T/R ERR	•Flashes during normal transmission •Lights up during standby or faulty transmission •Shuts off during faults (during watchdog timer fault)

Remarks

● Master station unit: SYSMAC-C (CV) series
C200H-RM201, C500-RM201

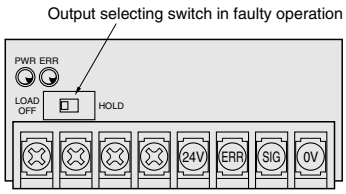
※For details, see the OMRON's programmable controller SYSMAC C(CV) series catalog, user's manual, etc.

● Number of outputs per block
Maximum of 16 solenoids

● Related materials: User's manual, document No. **HV007**

●For OMRON B7A Link Terminal

Transmission block specification: **-31** (standard type), **-32** (high speed type)



LED indicator

Indicator	Description
PWR	•Lights up when power is turned on
ERR	•Lights up during faulty transmission

Remarks

● Connection method: 1 to 1

(Transmission block spec.)	Standard type (**-31**)	High speed type (**-32**)
Transmission delay time	Max.31ms	Max.5ms
Transmission distance	Max.500m	Max.100m

※For details of the B7A Link Terminal, see the OMRON catalog, user's manual, etc.

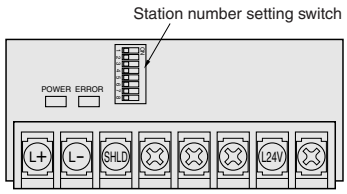
● Number of outputs per block
Maximum of 16 solenoids

● Error output specifications
Output mode: NPN open collector
Rated load voltage: DC24V
Output current: Sink current MAX. 40mA

● Related materials: User's manual, document No. **HV008**

●For KOYO ELECTRONICS INDUSTRIES SA Bus

Transmission block specification: **-41** (16 outputs), **-42** (8 outputs)



LED indicator

Indicator	Description
Power	•Lights up when power is turned on
Error	•Lights up during faulty transmission or other faults

Remarks

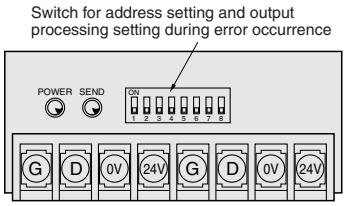
※For details of the SA Bus system, see the KOYO ELECTRONICS INDUSTRIES catalog, user's manual, etc.

● Number of outputs per block
16 solenoids (transmission block specification: **-41**)
8 solenoids (transmission block specification: **-42**)

● Related materials: User's manual, document No. **HV009**

●For SUNX S-LINK

Transmission block specification: **-51** (16 outputs), **-52** (8 outputs)



LED indicator

Indicator	Description
POWER	•Lights up when power is turned on
SEND	•Flashes during normal transmission •Lights up or shuts off during faulty transmission

Remarks

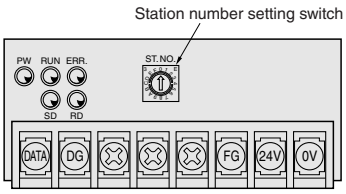
※For details of the S-LINK System, see the SUNX catalog, user's manual, etc.

● Number of outputs per block
16 solenoids (transmission block specification: **-51**)
8 solenoids (transmission block specification: **-52**)

● Related materials: User's manual, document No. **HV010**

●For Mitsubishi Electric MELSEC I/O LINK

Transmission block specification: **-61**



LED indicator

Indicator	Description
PW	•Lights up when power is turned on
RUN	•Lights up when receiving data transmitted from master unit is normal
SD	•Lights up during sending data to master unit
RD	•Lights up during receiving data from master unit
ERR.	•Lights up when faulty data transmitted from master unit

Remarks

- 16 remote I/O unit connection stations, for a maximum of 128 inputs/outputs

※For details, see Mitsubishi Electric's sequencer catalog, user's manual, etc.

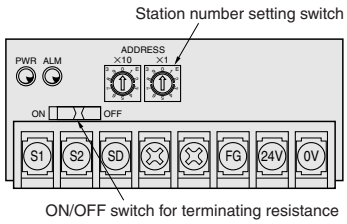
- Number of outputs per block
  Maximum of 16 solenoids

※ Since the block is equivalent to 4 stations, if substations are entirely composed of the blocks, a maximum of 4 units can connect to 1 master unit.

- Related materials: User's manual, document No. **HV011**

●For Fuji Electric FA Components & Systems T Link Mini

Transmission block specification: **-71**



LED indicator

Indicator	Description
PWR	•Lights up when power is turned on
ALM	•Lights up during faulty transmission

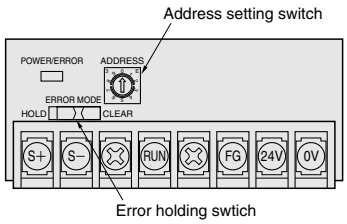
Remarks

※ For details of the T Link Mini, see the Fuji Electric FA Components & Systems catalog, user's manual, etc.

- Number of outputs per block
  Maximum of 16 solenoids
- Related materials: User's manual, document No. **HV012**

●For KEYENCE KZ-R

Transmission block specification: **-81**



LED indicator

Indicator	Description
POWER/ ERROR	•Green: Lights up for normal communications state •Orange: Lights up when communications state is poor (can also light up when address settings are incorrect) •Red: Lights up during faulty operation, or when transmission path is cut off

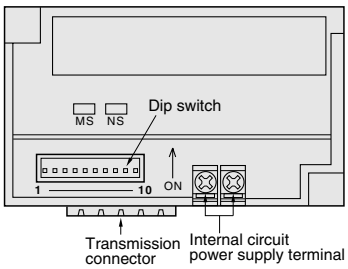
Remarks

※ For details of the KZ-R, see the KEYENCE catalog, user's manual, etc.

- Number of outputs per block
  Maximum of 16 solenoids
- Related materials: User's manual, document No. **HV013**

●For OMRON CompoBus/D

Transmission block specification: **-91**



LED indicator

Indicator	State	Color	Description
MS	Lights up	Green	•Normal state
	Flashing		•No setting state
	Lights up	Red	•Serious breakdown
	Flashing		•Minor breakdown
	Shuts off	—	•No power supply
NS	Lights up	Green	•Communication connection completed
	Flashing		•No communication connection
	Lights up	Red	•Serious communication fault
	Flashing		•Minor communication fault
	Shuts off	—	•No power supply

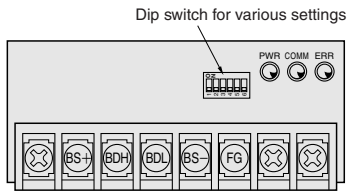
Remarks

※ For details of the CompoBus/D, see the OMRON catalog, user's manual, etc.
The transmission block is OMRON's remote adaptor-type **DRT1-OD16X**. For details about handling, see OMRON's user's manual.

- Number of outputs per block
  Maximum of 16 solenoids
- Related materials: User's manual, document No. **HV014**

●For OMRON CompoBus/S

Transmission block specification: **-A1** (16 outputs), **-A2** (8 outputs)



LED indicator

Indicator	State	Color	Description
PWR	Lights up	Green	•During power supply
	Shuts off		•Power not supplied
COMM	Lights up	Yellow	•During normal communication
	Shuts off		•Communication fault, or standby
ERR	Lights up	Red	•Communication fault occurred
	Shuts off		•During normal communication, or standby

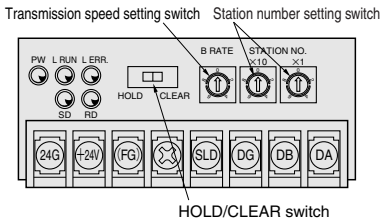
Remarks

※ For details of the CompoBus/S, see the OMRON catalog, user's manual, etc.

- Number of outputs per block
  16 solenoids (transmission block specification: **-A1**)
  8 solenoids (transmission block specification: **-A2**)
- Related materials: User's manual, document No. **HV015**

●For Mitsubishi Electric CC-Link

Transmission block specification: **-B1**



LED indicator

Indicator	Description
PW	•Lights up when power is turned on
L RUN	•Lights up when normal data is received from master station
SD	•Lights up during sending data
RD	•Lights up during receiving data
L ERR.	•Lights up during transmission errors, and shuts off when time is over Lights up due to station number setting error or transmission speed setting error

Remarks

※For details of the CC-Link, see the Mitsubishi Electric catalog, user's manual, etc.

- Number of outputs per block
  16 solenoids (transmission block specification: **-B1**)

※ Since the block occupies 1 station, if remote I/O stations are entirely composed of the blocks, a maximum of 64 units can connect to 1 master station.

- Related materials: User's manual, document No. **HV016**

■ For specifications and handling details, see the above-listed user's manuals (document Nos. **HV005**～**HV016**).

■Description of Changes

Offering more durability and improved reliability, the coil dimensions have been changed. Therefore, to identify between the earlier and new types due to a partial change in manifold dimensions, some portions of the outer color have been changed.

1.Changes in Single Valve Unit (Common to F10, F15, and F18 Series)

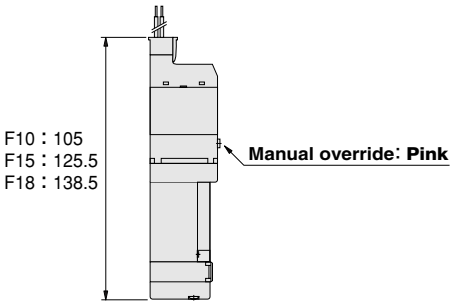
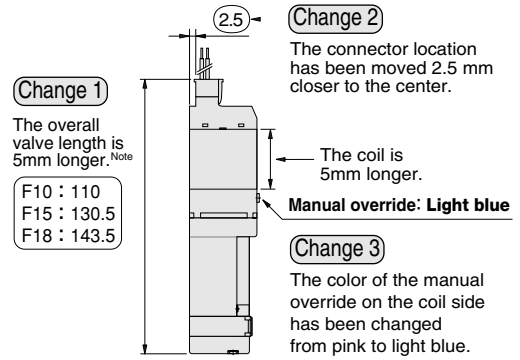
① S Type Plug Connector

Change 1 The coil is 5mm [0.197in.] longer, and the overall valve length is also 5mm longer.

Change 2 The connector location has been moved 2.5mm closer [0.098in.] to the center.

Change 3 To identify between new and earlier types, the color of the manual override on the coil side has been changed from pink to light blue.

(mm)

Earlier	New
※Illustration shows the F10 series.  	 Note: The valve length is longer toward the coil side when mounting on the manifold.

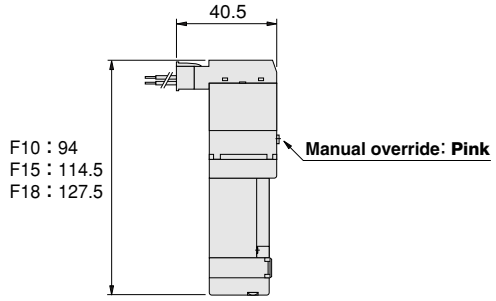
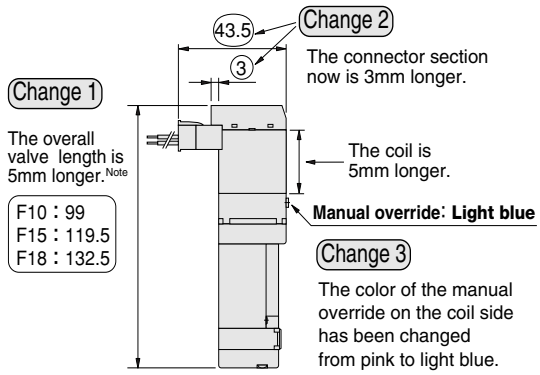
② L Type Plug Connector

Change 1 The coil is 5mm [0.197in.] longer, and the overall valve length is also 5mm longer.

Change 2 The connector section is now 3mm [0.118in.] longer.

Change 3 To identify between new and earlier types, the color of the manual override on the coil side has been changed from pink to light blue.

(mm)

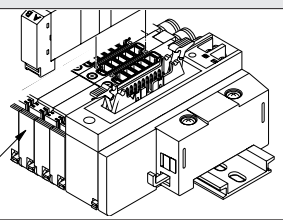
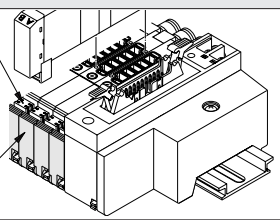
Earlier	New
※Illustration shows the F10 series.  	 Note: The valve length is longer toward the coil side when mounting on the manifold.

2.Change in Connector Receptacle Shape of Plug-in Type Manifold (Common to F10, F15, and F18 Series)

■Targeted Products: Split Manifold Plug-in Type, and Serial Transmission Compatible Manifold

Change 1 The connector receptacle position for the valve assembly is 3mm [0.118in.] deeper due to the change in the valve's L type plug connector.

Change 2 To identify between new and earlier types, the color of the valve assembly cover has been changed from ivory to light blue.

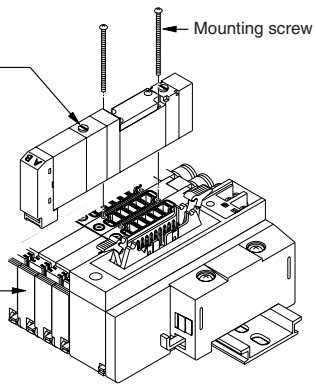
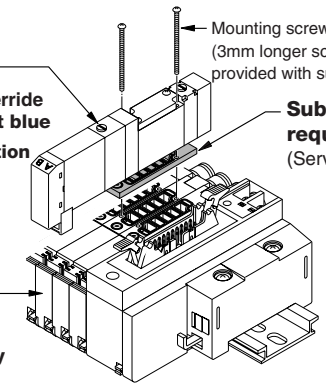
Earlier	New
※Illustration shows the F10 series.  	

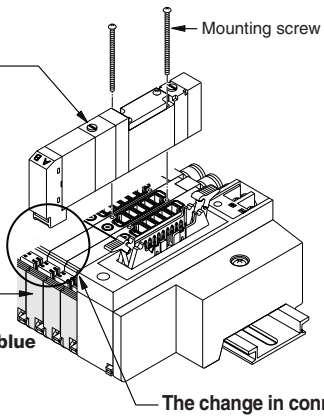
■Precautions for Valve Replacement

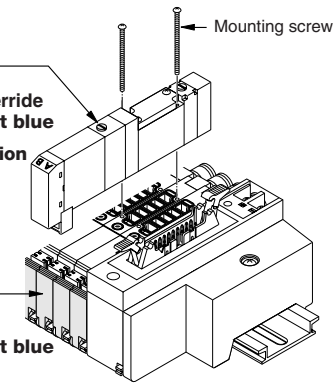
1.About Combination Mountings of New and Earlier Types of Valves and Manifolds

- For split manifolds plug-in type, and the serial transmission compatible manifolds, a change in the connector receptacle brings up some issues when combining earlier and new types of mounting valves, and the combination of the valves and manifolds when replacing the valves. For details about earlier and new combinations, see the table below.
- Since split manifolds non-plug-in type, monoblock manifolds, and PC board manifolds, do not have plug-in construction, consequently all combinations of earlier and new types are acceptable.

※Illustrations show the F10 series.

<table>
<tr><th colspan="2">Valve / Manifold</th><th>Earlier Color of manual override on coil side: Pink</th><th>New Color of manual override on coil side: Light blue</th></tr>
<tr><td rowspan="2">Targeted products
● Split manifold plug-in type
● Serial transmission compatible manifold</td><td>Earlier
Color of the cover on the valve base assembly: Ivory</td><td>Earlier type
Manual override Color: Pink
○
Earlier type
Cover Color: Ivory
 
</td><td>New type
Manual override color: Light blue
Caution
○
Earlier type
Cover Color: Ivory
 

Caution: The sub-plate shown in the illustration above is required to align the heights in the connector section. Always attach a sub-plate to mount the valve. Note that the valve height is 3mm [0.118in.] higher than the earlier type, and that the valve length on the coil side is 5mm [0.197in.] longer.</td></tr>
<tr><td>New
Color of the cover on the valve base assembly: Light blue</td><td>Earlier type
Manual override Color: Pink
×
New type
Cover Color: Light blue
 

The change in connector receptacle prevents the connector section from connecting firmly, resulting in poor contact.</td><td>New type
Manual override Color: Light blue
Caution
○
New type
Cover Color: Light blue
 

Caution: Sub-plate not required.
Use of a sub-plate prevents the connector section from connecting firmly, resulting in poor contact.</td></tr>
</table>

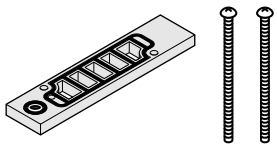
2.Sub-plate (Service Parts)

The sub-plate is provided as a service part, which is required to mount the new type valves on the earlier type split manifold plug-in type, and on the earlier type serial transmission compatible manifold.

Sub-plate (Sub-plate, gasket, O-ring, 2 mounting screws)

F □ Z - S

Valve size
10 : 10mm [0.394in.] width
15 : 15mm [0.591in.] width
18 : 18mm [0.709in.] width



F Series Order Codes

The solenoid valves F series order codes are classified into the following 8 categories. For details on order codes, see the designated pages.

F □ □

Koganei solenoid valves **F** series

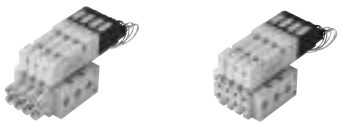
Valve size

- **●10:** 10mm [0.394in.] width (Effective area 5mm² 〔Cv: 0.28〕)
- **●15:** 15mm [0.591in.] width (Effective area 10mm² 〔Cv: 0.56〕)
- **●18:** 18mm [0.709in.] width (Effective area 18mm² 〔Cv: 1.0〕)

T : Single valve unit

p.525

M□A : Monoblock manifold **A** type (base piping type)



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M□F : Monoblock manifold **F** type (direct piping type)

p.529

M□AP : PC board manifold **A** type (base piping type)

p.531

M□FP : PC board manifold **F** type (direct piping type)

p.535

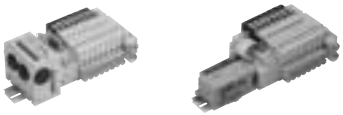
M□N : Split manifold non-plug-in type

p.537

M□P : Split manifold plug-in type

p.541

M□S : Serial transmission compatible manifold



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Single Valve Unit Order Codes

■Valve size

F10
10mm [0.394in.] width
Effective area 5mm² (Cv: 0.28)

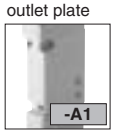
F15
15mm [0.591in.] width
Effective area 10mm² (Cv: 0.56)

F18
18mm [0.709in.] width
Effective area 18mm² (Cv: 1.0)

■Valve outlet type

Without inlet/ outlet block

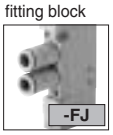
With A type outlet plate



With A type sub-base

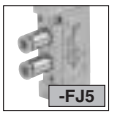
Outlet port
F10：Rc1/8
F15：Rc1/8
F18：Rc1/4

With outlet port dual-use different size fitting block



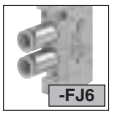
Outlet port fitting
F10：ϕ4, ϕ6
F15：ϕ6, ϕ8
F18：ϕ8, ϕ10

With outlet port single size fitting block



Outlet port fitting
F10：ϕ4
F15：ϕ6
F18：ϕ8

With outlet port single size fitting block



Outlet port fitting
F10：ϕ6
F15：ϕ8
F18：ϕ10

With outlet port female thread block

Outlet port
F10：M5×0.8
F15：Rc1/8
F18：Rc1/4

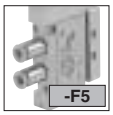
With outlet port dual-use different size fitting block
With inlet port female thread block

Outlet port fitting
F10：ϕ4, ϕ6
F15：ϕ6, ϕ8
F18：ϕ8, ϕ10

With outlet port female thread block
With inlet port female thread block

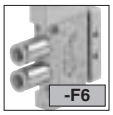
Outlet port
F10：M5×0.8
F15：Rc1/8
F18：Rc1/4

With outlet port single size fitting block
With inlet port female thread block



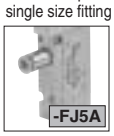
Outlet port fitting
F10：ϕ4
F15：ϕ6
F18：ϕ8

With outlet port single size fitting block
With inlet port female thread block



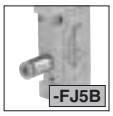
Outlet port fitting
F10：ϕ6
F15：ϕ8
F18：ϕ10

3-port normally closed (NC) Note5
With outlet port single size fitting block



Outlet port fitting
F10：ϕ4
F15：ϕ6
(Not available for F18)

3-port normally open (NO) Note5
With outlet port single size fitting block

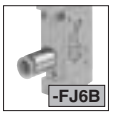


Outlet port fitting
F10：ϕ4
F15：ϕ6
(Not available for F18)

3-port normally closed (NC) Note5
With outlet port single size fitting block

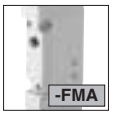
Outlet port fitting
F10：ϕ6
F15：ϕ8
(Not available for F18)

3-port normally open (NO) Note5
With outlet port single size fitting block



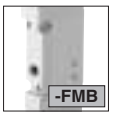
Outlet port fitting
F10：ϕ6
F15：ϕ8
(Not available for F18)

3-port normally closed (NC) Note5
With outlet port female thread block



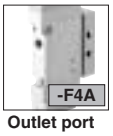
Outlet port
F10：M5×0.8
F15：Rc1/8
(Not available for F18)

3-port normally open (NO) Note5
With outlet port female thread block



Outlet port
F10：M5×0.8
F15：Rc1/8
(Not available for F18)

3-port normally closed (NC) Note5
With outlet port female thread block
With inlet port female thread block

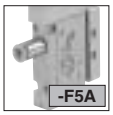


Outlet port
F10：M5×0.8
F15：Rc1/8
(Not available for F18)

3-port normally open (NO) Note5
With outlet port female thread block
With inlet port female thread block

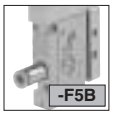
Outlet port
F10：M5×0.8
F15：Rc1/8
(Not available for F18)

3-port normally closed (NC) Note5
With outlet port single size fitting block
With inlet port female thread block



Outlet port fitting
F10：ϕ4
F15：ϕ6
(Not available for F18)

3-port normally open (NO) Note5
With outlet port single size fitting block
With inlet port female thread block

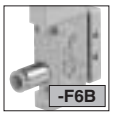


Outlet port fitting
F10：ϕ4
F15：ϕ6
(Not available for F18)

3-port normally closed (NC) Note5
With outlet port single size fitting block
With inlet port female thread block

Outlet port fitting
F10：ϕ6
F15：ϕ8
(Not available for F18)

3-port normally open (NO) Note5
With outlet port single size fitting block
With inlet port female thread block



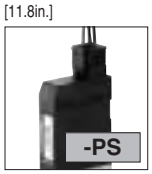
Outlet port fitting
F10：ϕ6
F15：ϕ8
(Not available for F18)

■Wiring specification

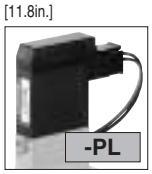
L type plug connector
Without connector

S type plug connector
Without connector

S type plug connector
Lead wire 300mm [11.8in.]



L type plug connector
Lead wire 300mm [11.8in.]



S type plug connector
Lead wire 3000mm [118in.]

L type plug connector
Lead wire 3000mm [118in.]

■Valve specification

T0：2-position single solenoid specification (for single solenoid only)
T1：2-position single solenoid specification (for both single and double solenoid use)
T2：2-position double solenoid specification (for both single and double solenoid use)
T3：3-position closed center
T4：3-position exhaust center
T5：3-position pressure center

■Operation type

Blank
Internal pilot type

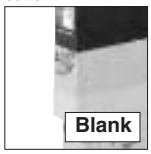
G
External pilot type[Note] (for positive pressure)

V
External pilot type[Note] (for vacuum)※
※: This is a vacuum valve.

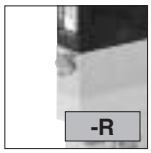
Note: When using as a single unit, select **-A2** (A type with sub-base) for the valve outlet type. Without a sub-base, piping for the external pilot is not possible.

■Manual override

Manual override button



Manual override lever (made to order) Note1



Valve size	Valve specification	Operation type	Manual override	Valve outlet type	Wiring specification	Voltage
F10 F15 F18	T0 T1 T2 T3 T4Note4 T5Note4	Blank G V	Blank -RNote1	BlankNote2 -A1Note2 -A2 -FJNote2 -FJ5Note2 -FJ6Note2 -FMNote2 -F3Note3 -F4Note3 -F5Note3 -F6Note3 -FJ5ANote2 -FJ5BNote2 -FJ6ANote2 -FJ6BNote2 -FMANote2 -FMBNote2 -F4ANote3 -F4BNote3 -F5ANote3 -F5BNote3 -F6ANote3 -F6BNote3	Blank -PN -PS -PL -PS3 -PL3	DC24V DC12V AC100V

Notes: 1. The manual override lever is made to order. Consult us for delivery. When the valve specifications are **T1** or **T2**, the manual override lever is available for the A side only.
2. Two manifold mounting screws are included.
3. The units with inlet port female thread blocks can be used only with the internal pilot type valve operation type .
4. Not available in the vacuum valves.
5. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

Additional Parts Order Codes for Single Valve Unit

● For internal pilot

F□Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Parts content
21 : Mounting bracket (mounting bracket, 2 mounting screws)
25 : Sub-base (sub-base body, gasket, exhaust valve) Note 1
P : Plate (plate, gasket, 2 mounting screws)
J : Dual-use different size fitting block (fitting block, gasket, 2 mounting screws)
J5 : Single size fitting block **F10**: ϕ4, **F15**: ϕ6, **F18**: ϕ8 (fitting block, gasket, 2 mounting screws)
J6 : Single size fitting block **F10**: ϕ6, **F15**: ϕ8, **F18**: ϕ10 (fitting block, gasket, 2 mounting screws)
J5A : Single size fitting block for 3-port **F10**: ϕ4, **F15**: ϕ6 (fitting block, gasket, 2 mounting screws) Note3
J6A : Single size fitting block for 3-port **F10**: ϕ6, **F15**: ϕ8 (fitting block, gasket, 2 mounting screws) Note3
M : Female thread block (female thread block, gasket, 2 mounting screws)
MA : Female thread block for 3-port (female thread block, gasket, 2 mounting screws) Note 3
MP : P port female thread block (P port female thread block, gasket) Note 1
GS1 : Gasket (gasket, exhaust valve) Note 2

Notes: 1. Valve mounting screws are not included.
2. Caution should be exercised as this gasket is different from the **GS2** gasket for the split-type manifolds.
3. Not available in F18 series. Common to both normally closed (NC) and normally open (NO) types. Select the type by application requirements.

●For external pilot

F□Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Parts content
P : Plate (plate, gasket, 2 mounting screws)
J : Dual-use different size fitting block (fitting block, gasket, 2 mounting screws)
J5 : Single size fitting block **F10**: ϕ4, **F15**: ϕ6, **F18**: ϕ8 (fitting block, gasket, 2 mounting screws)
J6 : Single size fitting block **F10**: ϕ6, **F15**: ϕ8, **F18**: ϕ10 (fitting block, gasket, 2 mounting screws)
J5A : Single size fitting block for 3-port **F10**: ϕ4, **F15**: ϕ6 (fitting block, gasket, 2 mounting screws) Note1
J6A : Single size fitting block for 3-port **F10**: ϕ6, **F15**: ϕ8 (fitting block, gasket, 2 mounting screws) Note1
M : Female thread block (female thread block, gasket, 2 mounting screws)
MA : Female thread block for 3-port (female thread block, gasket, 2 mounting screws) Note 1
GS1 : Gasket (gasket, exhaust valve) Note 2

Notes: 1. Not available in F18 series. Common to both normally closed (NC) and normally open (NO) types. Select the type by application requirements.
2. Caution should be exercised as this gasket is different from the **GS2** gasket for the split type manifolds.

Sub-base for external pilot

F□ZG - 25

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Connector-related order codes

FZ - □

Valve specification
For **T1, T2, T3, T4, T5**

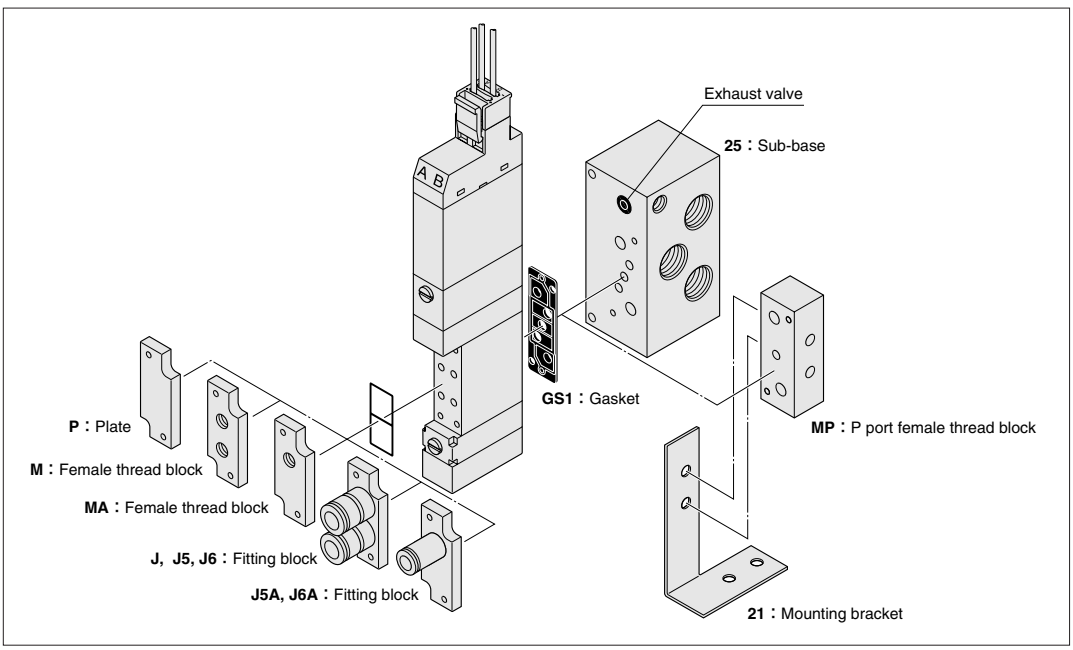
Connector specification
CP : Connector, lead wire length 300mm [11.8in.] (black, red, white, for total of 3 lead wires)
CP3 : Connector, lead wire length 3000mm [118in.] (black, red, white, for total of 3 lead wires)
CLN : Connector without lead wire (1 short bar and 3 contacts included)
CC1.5 : Cabtyre cable, length 1500mm [59in.]※
CC3 : Cabtyre cable, length 3000mm [118in.]※

※For details, see p.506.

FZ0 - □

Valve specification
For **T0**

Connector specification
CP : Connector, lead wire length 300mm [11.8in.] (black, red, for total of 2 lead wires)
CP3 : Connector, lead wire length 3000mm [118in.] (black, red, for total of 2 lead wires)
CLN : Connector without lead wire (1 short bar, 2 contacts included)



Monoblock Manifold A Type (Base Piping Type) Order Codes

■ Valve size

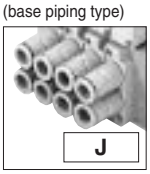
F10M
10mm [0.394in.] width Effective area 5mm² (Cv: 0.28)

F15M
15mm [0.591in.] width Effective area 10mm² (Cv: 0.56)

F18M
18mm [0.709in.] width Effective area 18mm² (Cv: 1.0)

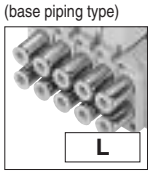
■ Manifold outlet specification

With dual-use different size fitting blocks (base piping type)



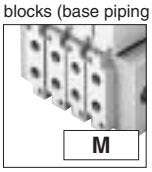
Outlet port fitting
F10 : φ4, φ6
F15 : φ6, φ8
F18 : φ8, φ10

With selectable fittings (base piping type)



Outlet port should be selected in accordance with the manifold fitting specification

With female thread blocks (base piping type)



Outlet port female thread
F10 : M5×0.8
F15 : Rc1/8
F18 : Rc1/4

■ Valve specification

T0 : 2-position, for single solenoid only
T1 : 2-position, single solenoid specification
T2 : 2-position, double solenoid specification
T3 : 3-position, closed center
T4 : 3-position, exhaust center
T5 : 3-position, pressure center

■ Pilot specification

Blank
Internal pilot manifold

G
External pilot manifold

■ Operation type

Blank
Internal pilot type[Note4]

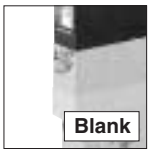
G
External pilot type[Note5] (for positive pressure)

V
External pilot type[Note5] (for vacuum)※
※: This is a vacuum valve.

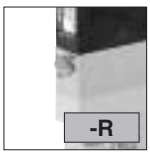
Note: Cannot be mounted together with a positive pressure valve.

■ Manual override

Manual override button

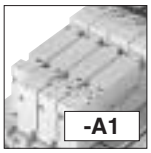


Manual override lever (made to order) [Note2]



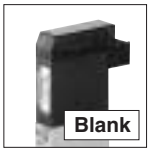
■ Valve outlet type

With plate [Note 3] (base piping type)



■ Wiring specification

L type plug connector
Without connector



S type plug connector
Without connector

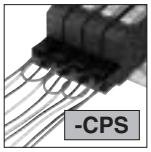
S type plug connector
Lead wire 300mm

L type plug connector
Lead wire 300mm

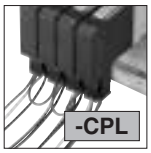
S type plug connector
Lead wire 3000mm

L type plug connector
Lead wire 3000mm

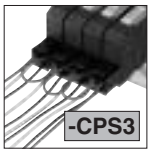
Pre-wired positive common terminal
S type plug connector
Lead wire 300mm



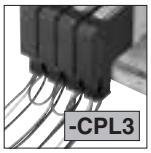
Pre-wired positive common terminal
L type plug connector
Lead wire 300mm



Pre-wired positive common terminal
S type plug connector
Lead wire 3000mm



Pre-wired positive common terminal
L type plug connector
Lead wire 3000mm



300mm = 11.8in.
3000mm = 118in.

■ Individual air supply and exhaust spacer

Blank : Without spacer
-NPM : Individual air supply spacer (with M5 female thread for F10)
-NP6 : Individual air supply spacer (with φ6 fitting for F15)
-NP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
-NP0 : Individual air supply spacer (with φ10 fitting for F18)
-NRM : Individual exhaust spacer (with M5 female thread for F10)
-NR6 : Individual exhaust spacer (with φ6 fitting for F15)
-NR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
-NR0 : Individual exhaust spacer (with φ10 fitting for F18)
For details, see p.509.

■ Manifold fitting specification

5-port specification

-J5	With single size fitting block (base piping type)	**F10 :** φ4 **F15 :** φ6 **F18 :** φ8
-J6	With single size fitting block (base piping type)	**F10 :** φ6 **F15 :** φ8 **F18 :** φ10
-M	With female thread block (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8 **F18 :** Rc1/4

3-port specification

-J5A	With single size fitting block, normally closed (NC) (base piping type)	**F10 :** φ4 **F15 :** φ6
-J5B	With single size fitting block, normally open (NO) (base piping type)	**F10 :** φ4 **F15 :** φ6
-J6A	With single size fitting block, normally closed (NC) (base piping type)	**F10 :** φ6 **F15 :** φ8
-J6B	With single size fitting block, normally open (NO) (base piping type)	**F10 :** φ6 **F15 :** φ8
-MA	With female thread block, normally closed (NC) (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8
-MB	With female thread block, normally open (NO) (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8

Caution: The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

Note: Valves of different sizes cannot be mounted together on manifolds.

Valve size	Valve units	Manifold outlet specification	Pilot specification	Station	Valve size	Valve specification	Operation type	Manual override	Valve outlet type	Wiring specification	Manifold fitting specification	Individual air supply and exhaust spacer	Voltage
Manifold model				Mounting valve models									
F10M F15M F18M	2 ⋮ 20	A	J M	Blank G	stn. 1 ⋮ stn.□ Note1	F10 F15 F18	T0 T1 T2 T3 T4[Note6] T5[Note6]	Note4 Blank G[Note5] V[Note5]	Blank -R[Note2]	-A1 Note3	Blank -PN -CPS -PS -CPL -PL -CPS3 -PS3 -CPL3 -PL3		Blank -NPM -NRM -NP6 -NR6 -NP8 -NR8 -NP0 -NR0	DC24V DC12V AC100V
							BP (for block-off plate)						
F10M F15M F18M	2 ⋮ 20	A	L	Blank G	stn. 1 ⋮ stn.□ Note1	F10 F15 F18	T0 T1 T2 T3 T4[Note6] T5[Note6]	Note4 Blank G[Note5] V[Note5]	Blank -R[Note2]	-A1 Note3	Blank -PN -CPS -PS -CPL -PL -CPS3 -PS3 -CPL3 -PL3	-J5 -J6A -J6 -J6B -M -MA -J5A -MB -J5B	Blank -NPM -NRM -NP6 -NR6 -NP8 -NR8 -NP0 -NR0	DC24V DC12V AC100V
							BP (for block-off plate)						

Notes: 1. Valve mounting location is from the left, with the solenoid on top, and the 4(A), 2(B) ports side in front.
2. The manual override lever is made to order. Consult us for delivery. When the valve specifications are **T1** or **T2**, the manual override lever is placed on the A side only.
3. Always enter **-A1**. 4. Cannot be mounted on the external pilot manifold. 5. Cannot be mounted on the internal pilot manifold. 6. Not available in the vacuum valves.

Additional Parts Order Codes for Monoblock Manifold A Type

Gasket (gasket and exhaust valve)

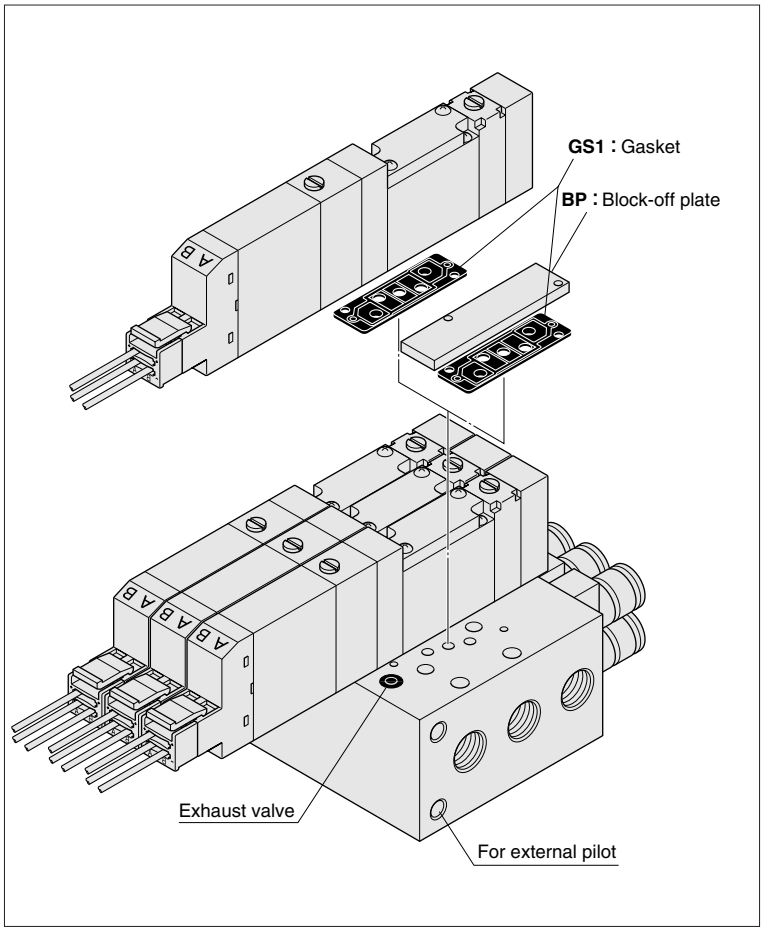
F□Z - GS1

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Block-off plate (block-off plate and 2 mounting screws)

F□BP

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width



Connector-related order codes

FZ□ - □

300mm = 11.8in.
1500mm = 59in.
3000mm = 118in.

Valve specification
Blank : For **T1, T2, T3, T4, T5**
0 : For **T0**

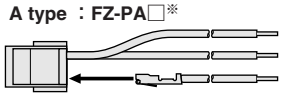
※For details, see p.506.

Connector specification
CP : Connector, lead wire length 300mm
CP3 : Connector, lead wire length 3000mm
CLN : Connector without lead wire (short bar and contacts included)
PA : Positive common A type, lead wire length 300mm※
PA3 : Positive common A type, lead wire length 3000mm※
PB : Positive common B type, lead wire length 300mm※
PB3 : Positive common B type, lead wire length 3000mm※
PC : Positive common C type, lead wire length 300mm※
PC3 : Positive common C type, lead wire length 3000mm※
CC1.5 : Cabtyre cable, length 1500mm Note※
CC3 : Cabtyre cable, length 3000mm Note※

Note: Not available for **T0**.

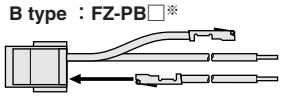
●Common connector assembly

A type ：FZ-PA□※



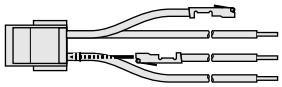
Red Common wire (+)
Black A side (–)
White B side (–) (Insert when using as double solenoid) Note

B type ：FZ-PB□※



Red Common wire (+)
Black A side (–)
White B side (–) (Insert when using as double solenoid) Note

C type ：FZ-PC□※



Red Common wire (+)
Black A side (–)
White B side (–) (Insert when using as double solenoid) Note
Red Common wire (+)

※: Lead wire length **Blank:** 300mm [11.8in.]
3: 3000mm [118in.]

Note: White lead wire is not available for **FZ0-P□□**.

Individual air supply and exhaust spacer (Spacer for non-plug-in type, gasket, exhaust valve, and 2 mounting screws)

F□Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Specification
NPM : Individual air supply spacer (with M5 female thread for F10)
NP6 : Individual air supply spacer (with φ6 fitting for F15)
NP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
NP0 : Individual air supply spacer (with φ10 fitting for F18)
NRM : Individual exhaust spacer (with M5 female thread for F10)
NR6 : Individual exhaust spacer (with φ6 fitting for F15)
NR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
NR0 : Individual exhaust spacer (with φ10 fitting for F18)

※For details, see p.509.

Manifold Order Code Example
(6 units of F10 Series)

F10M6AL

stn.1～2 F10T0-A1-PS-J5 DC24V
stn.3～5 F10T2-A1-PS-J6 DC24V
stn.6 F10BP-J6

Note: This order code example has no relationship to the illustration at upper right.

Muffler

KM - J□

Fitting size
6 : Outer diameter φ6 (for individual exhaust spacer)
8 : Outer diameter φ8 (for individual exhaust spacer)
10 : Outer diameter φ10 (for individual exhaust spacer)
(Sales unit: Set of 10 mufflers)

Precautions for Order Codes

●Manifold outlet specification
Select from among "dual-use different size fitting blocks", "with female thread blocks" or "with selectable fittings." For repair or replacement, purchase the single valve unit additional parts, **F□Z-J** (dual-use different size fitting block), **F□Z-J□** (single size fitting block), or **F□Z-M** (female thread block), on p.526.

●Orders for valves only
Place orders from "Single Valve Unit Order Codes" on p.525. Note, however, that the only compatible valve type is **A1.** In addition, for common terminal wiring connections, order the common connector assemblies listed above separately.

Monoblock Manifold F Type (Direct Piping Type) Order Codes

■Valve size

F10M
10mm [0.394in.] width
Effective area 5mm² 〔Cv: 0.28〕

F15M
15mm [0.591in.] width
Effective area 10mm² 〔Cv: 0.56〕

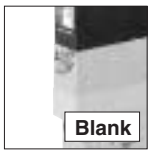
F18M
18mm [0.709in.] width
Effective area 18mm² 〔Cv: 1.0〕

■Valve specification

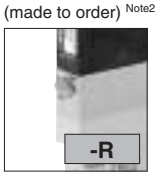
T0 : 2-position, for single solenoid only
T1 : 2-position, single solenoid specification
T2 : 2-position, double solenoid specification
T3 : 3-position, closed center
T4 : 3-position, exhaust center
T5 : 3-position, pressure center

■Manual override

Manual override button



Manual override lever (made to order) Note2



■Valve outlet type

5-port specification

-FJ	With dual-use different size fitting block (direct piping type)	**F10 :** φ4, φ6 **F15 :** φ6, φ8 **F18 :** φ8, φ10
-FJ5	With single size fitting block (direct piping type)	**F10 :** φ4 **F15 :** φ6 **F18 :** φ8
-FJ6	With single size fitting block (direct piping type)	**F10 :** φ6 **F15 :** φ8 **F18 :** φ10
-FM	With female thread block (direct piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8 **F18 :** Rc1/4

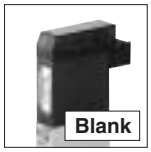
3-port specification

-FJ5A	With single size fitting block, normally closed (NC) (direct piping type)	**F10 :** φ4 **F15 :** φ6
-FJ5B	With single size fitting block, normally open (NO) (direct piping type)	**F10 :** φ4 **F15 :** φ6
-FJ6A	With single size fitting block, normally closed (NC) (direct piping type)	**F10 :** φ6 **F15 :** φ8
-FJ6B	With single size fitting block, normally open (NO) (direct piping type)	**F10 :** φ6 **F15 :** φ8
-FMA	With female thread block, normally closed (NC) (direct piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8
-FMB	With female thread block, normally open (NO) (direct piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8

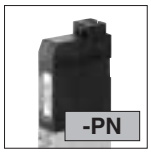
Caution: The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

■Wiring specification

L type plug connector
Without connector



S type plug connector
Without connector



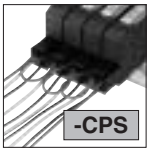
S type plug connector
Lead wire 300mm

L type plug connector
Lead wire 300mm

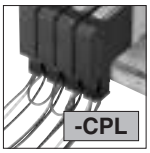
S type plug connector
Lead wire 3000mm

L type plug connector
Lead wire 3000mm

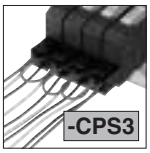
Pre-wired positive common terminal
S type plug connector
Lead wire 300mm



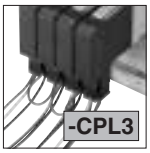
Pre-wired positive common terminal
L type plug connector
Lead wire 300mm



Pre-wired positive common terminal
S type plug connector
Lead wire 3000mm



Pre-wired positive common terminal
L type plug connector
Lead wire 3000mm



300mm = 11.8in.
3000mm = 118in.

■Individual air supply and exhaust spacer

Blank : Without spacer
-NPM : Individual air supply spacer (with M5 female thread for F10)
-NP6 : Individual air supply spacer (with φ6 fitting for F15)
-NP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
-NP0 : Individual air supply spacer (with φ10 fitting for F18)
-NRM : Individual exhaust spacer (with M5 female thread for F10)
-NR6 : Individual exhaust spacer (with φ6 fitting for F15)
-NR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
-NR0 : Individual exhaust spacer (with φ10 fitting for F18)

For details, see p.509.

Note: Valves of different sizes cannot be mounted together on manifolds.

Manifold model			Mounting valve models							
Valve size	Valve units		Station	Valve size	Valve specification	Manual override	Valve outlet type	Wiring specification	Individual air supply and exhaust spacer	Voltage
F10M F15M F18M	2 ⋮ 20	F	stn. 1 ⋮ stn.□ Note1	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank -R Note2	-FJ -FJ5B -FJ5 -FJ6A -FJ6 -FJ6B -FM -FMA -FJ5A -FMB	Blank -PN -CPS -PS -CPL -PL -CPS3 -PS3 -CPL3 -PL3	Blank -NPM -NRM -NP6 -NR6 -NP8 -NR8 -NP0 -NR0	DC24V DC12V AC100V
					BP (for block-off plate)					

Notes 1: Valve mounting location is from the left, with the solenoid on top, and the 4(A), 2(B) ports side in front.
2: The manual override lever is made to order. Consult us for delivery. When the valve specifications are **T1** or **T2**, the manual lever override is placed on the A side only.

Remark: The external pilot valve cannot be mounted on the F type manifold.

Additional Parts Order Codes for Monoblock Manifold F Type

Gasket (gasket and exhaust valve)

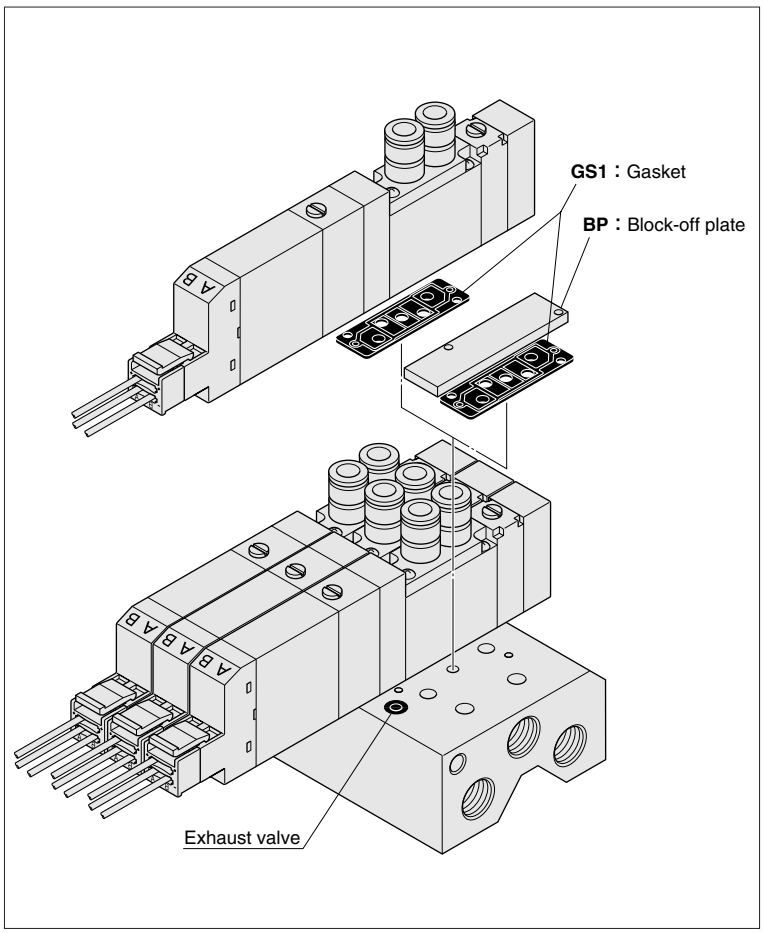
F□Z - GS1

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Block-off plate (block-off plate and 2 mounting screws)

F□BP

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width



Connector-related order codes

FZ□ - □

300mm = 11.8in.
1500mm = 59in.
3000mm = 118in.

Valve specification
Blank： For **T1, T2, T3, T4, T5**
0： For **T0**

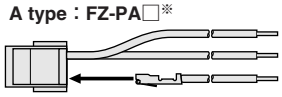
※For details, see p.506.

Connector specification
CP : Connector, lead wire length 300mm
CP3 : Connector, lead wire length 3000mm
CLN : Connector without lead wire (short bar, contacts included)
PA : Positive common A type, lead wire length 300mm※
PA3 : Positive common A type, lead wire length 3000mm※
PB : Positive common B type, lead wire length 300mm※
PB3 : Positive common B type, lead wire length 3000mm※
PC : Positive common C type, lead wire length 300mm※
PC3 : Positive common C type, lead wire length 3000mm※
CC1.5 : Cabtyre cable, length 1500mm Note※
CC3 : Cabtyre cable, length 3000mm Note※

Note: Not available for **T0**.

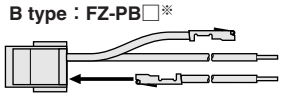
●Common connector assembly

A type：FZ-PA□※



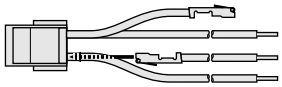
Red Common wire (+)
Black A side (–)
White B side (–) (Insert when using as double solenoid) Note

B type：FZ-PB□※



Red Common wire (+)
Black A side (–)
White B side (–) (Insert when using as double solenoid) Note

C type：FZ-PC□※



Red Common wire (+)
Black A side (–)
White B side (–) (Insert when using as double solenoid) Note
Red Common wire (+)

※: Lead wire length **Blank:** 300mm [11.8in.]
3: 3000mm [118in.]

Note: White lead wire is not available in **FZ0-P□□**.

Individual air supply and exhaust spacer (Spacer for non-plug-in type, gasket, exhaust valve, and 2 mounting screws)

F□Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Specification
NPM : Individual air supply spacer (with M5 female thread for F10)
NP6 : Individual air supply spacer (with φ6 fitting for F15)
NP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
NP0 : Individual air supply spacer (with φ10 fitting for F18)
NRM : Individual exhaust spacer (with M5 female thread for F10)
NR6 : Individual exhaust spacer (with φ6 fitting for F15)
NR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
NR0 : Individual exhaust spacer (with φ10 fitting for F18)

※For details, see p.509.

Manifold Order Code Example
(4 units of F10 Series)

F10M4F

stn.1～2 **F10T0-FJ5-PS DC24V**
stn.3 **F10T2-FJ6-PS DC24V**
stn.4 **F10BP**

Note: This order code example has no relationship to the illustration at upper right.

Muffler

KM - J□

Fitting size
6 : Outer diameter φ6 (for individual exhaust spacer)
8 : Outer diameter φ8 (for individual exhaust spacer)
10 : Outer diameter φ10 (for individual exhaust spacer)
(Sales unit: Set of 10 mufflers)

Precautions for Order Codes

● **Orders for valves only**
Place orders from "Single Valve Unit Order Codes" on p.525.
Select from valve types **-FJ, -FJ5, -FJ6, -FM, -FJ5A, -FJ5B, -FJ6A, -FJ6B, -FMA,** or **-FMB.** In addition, for common terminal wiring connections, order the common connector assemblies listed above separately.

PC Board Manifold A Type (Base Piping Type) Order Codes

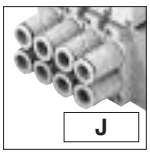
■ Valve size

F10M
10mm [0.394in.] width
Effective area 5mm² (Cv: 0.28)

F15M
15mm [0.591in.] width
Effective area 10mm² (Cv: 0.56)

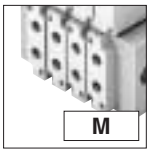
■ Manifold outlet specification

With dual-use different size fitting blocks (base piping type)



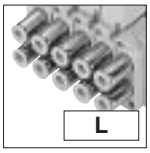
Outlet port fitting
F10：φ4, φ6
F15：φ6, φ8

With female thread blocks (base piping type)



Outlet port female thread
F10：M5×0.8
F15：Rc1/8

With selectable fittings (base piping type)



Outlet port should be selected in accordance with the manifold fitting specification

■ Pilot specification

Blank
Internal pilot manifold

G
External pilot manifold

■ Wiring specification (wiring block)

Flat cable connector (with socket and strain relief)

-F200：20-pin
-F201：20-pin
For details, see p.553.

■ Wiring connection specification

-S
Single wiring: Wiring as single solenoid only.
Note: This is not the same as packed wiring.

-W
Double wiring: Wiring is always for the double solenoid, regardless of the specifications of the mounted valve.

Manifold model

	Valve size	Valve units		Manifold outlet specification	Pilot specification	Wiring specification	Wiring connection specification
Single wiring type Note 1	F10M F15M	6 8 10 12 14 16 Note3	AP	J M	Blank G	-F200 -F201	-S
				L	Blank G	-F200 -F201	-S
Double wiring type Note 2		6 8 Note3	AP	J M	Blank G	-F200 -F201	-W
				L	Blank G	-F200 -F201	-W

Notes: 1. Wiring as single solenoid only. Note that this is not the same as packed wiring. The mounting valves are limited to single solenoid only (**T0, T1** specifications). Therefore, even if the **T1** specification valve is switched over to a double solenoid, no power will be applied to the B side solenoid.
2. Wiring is always for the double solenoid, regardless of the specifications of the mounted valves.
3. The number of units in terms of the wiring connection specifications are, for single wiring, 6～16 (even numbers only), and for double wiring, 6 or 8.

■Operation type

Blank
Internal pilot type Note6

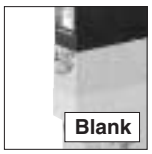
G
External pilot type Note7
(for positive pressure)

V
External pilot type Note7
(for vacuum)※
※: This is a vacuum valve.

Note: Cannot be mounted together with a valve for positive pressure.

■Manual override

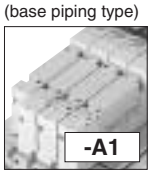
Manual override button



Manual override lever (made to order) Note8

■Valve outlet type

With plates Note 9
(base piping type)



■Wiring specification

S type plug connector
Lead wire for PC board Note9

■Manifold fitting specification

5-port specification

-J5	With single size fitting block (base piping type)	**F10 :** φ4 **F15 :** φ6
-J6	With single size fitting block (base piping type)	**F10 :** φ6 **F15 :** φ8
-M	With female thread block (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8

3-port specification

-J5A	With single size fitting block, normally closed (NC) (base piping type)	**F10 :** φ4 **F15 :** φ6
-J5B	With single size fitting block, normally open (NO) (base piping type)	**F10 :** φ4 **F15 :** φ6
-J6A	With single size fitting block, normally closed (NC) (base piping type)	**F10 :** φ6 **F15 :** φ8
-J6B	With single size fitting block, normally open (NO) (base piping type)	**F10 :** φ6 **F15 :** φ8
-MA	With female thread block, normally closed (NC) (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8
-MB	With female thread block, normally open (NO) (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8

Caution: The 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

■Valve specification

T0 : 2-position, for single solenoid only
T1 : 2-position, single solenoid specification
T2 : 2-position, double solenoid specification
T3 : 3-position, closed center
T4 : 3-position, exhaust center Note 10
T5 : 3-position, pressure center Note 10

Note: Valves of different sizes cannot be mounted together on manifolds.

■Individual air supply and exhaust spacer

Blank : Without spacer
-NPM : Individual air supply spacer (with M5 female thread for F10)
-NP6 : Individual air supply spacer (with φ6 fitting for F15)
-NP8 : Individual air supply spacer (with φ8 fitting for F15)
-NRM : Individual exhaust spacer (with M5 female thread for F10)
-NR6 : Individual exhaust spacer (with φ6 fitting for F15)
-NR8 : Individual exhaust spacer (with φ8 fitting for F15)
For details, see p.509.

Station	Valve size	Valve specification	Operation type	Manual override	Valve outlet type	Wiring specification	Manifold fitting specification	Individual air supply and exhaust spacer	Voltage
Mounting valve models									
stn. 1 : : **stn.□** Note4	**F10** **F15**	**T0** **T1** Note5	**Blank** Note6 **G** Note7 **V** Note7	**Blank** **-R** Note8	**-A1** Note9	**-PP** Note9		**Blank** **-NPM** **-NRM** **-NP6** **-NR6** **-NP8** **-NR8**	**DC24V** **DC12V**
		BPC (for block-off plate)							
stn. 1 : : **stn.□** Note4	**F10** **F15**	**T0** **T1** Note5	**Blank** Note6 **G** Note7 **V** Note7	**Blank** **-R** Note8	**-A1** Note9	**-PP** Note9	**-J5** **-J6** **-M** **-J5A** **-J5B** **-J6A** **-J6B** **-MA** **-MB**	**Blank** **-NPM** **-NRM** **-NP6** **-NR6** **-NP8** **-NR8**	**DC24V** **DC12V**
		BPC (for block-off plate)							
stn. 1 : : **stn.□** Note4	**F10** **F15**	**T0** **T1** **T2** **T3** **T4** Note10 **T5** Note10	**Blank** Note6 **G** Note7 **V** Note7	**Blank** **-R** Note8	**-A1** Note9	**-PP** Note9 Note11		**Blank** **-NPM** **-NRM** **-NP6** **-NR6** **-NP8** **-NR8**	**DC24V** **DC12V**
		BPC (for block-off plate)							
stn. 1 : : **stn.□** Note4	**F10** **F15**	**T0** **T1** **T2** **T3** **T4** Note10 **T5** Note10	**Blank** Note6 **G** Note7 **V** Note7	**Blank** **-R** Note8	**-A1** Note9	**-PP** Note9 Note11	**-J5** **-J6** **-M** **-J5A** **-J5B** **-J6A** **-J6B** **-MA** **-MB**	**Blank** **-NPM** **-NRM** **-NP6** **-NR6** **-NP8** **-NR8**	**DC24V** **DC12V**
		BPC (for block-off plate)							

Notes: 4. Valve mounting location is from the left, with the solenoid on top, and the 4(A), 2(B) ports side in front.
5. The mounting valves are limited to **T0, T1** specifications only (single solenoid specifications). In addition, even if the **T1** specification valve is switched over to a double solenoid, no power will be applied to the B side solenoid.
6. Cannot be mounted on the external pilot manifold.
7. Cannot be mounted on the internal pilot manifold.
8. The manual override lever is made to order. Consult us for delivery. When the valve specifications are **T1** or **T2**, the manual override lever is placed on the A side only.
9. Always enter **-A1** or **-PP**.
10. Not available in the vacuum valves.
11. The lead wire on the solenoid B side (white) is not available in valve specification **T0**.

Additional Parts Order Codes for PC Board Manifold A Type

Gasket (gasket and exhaust valve)

F□Z - GS1

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width

Block-off plate
(block-off plate, 2 mounting screws, and housing)

F□BPC

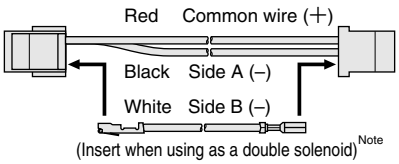
Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width

Connector-related order codes

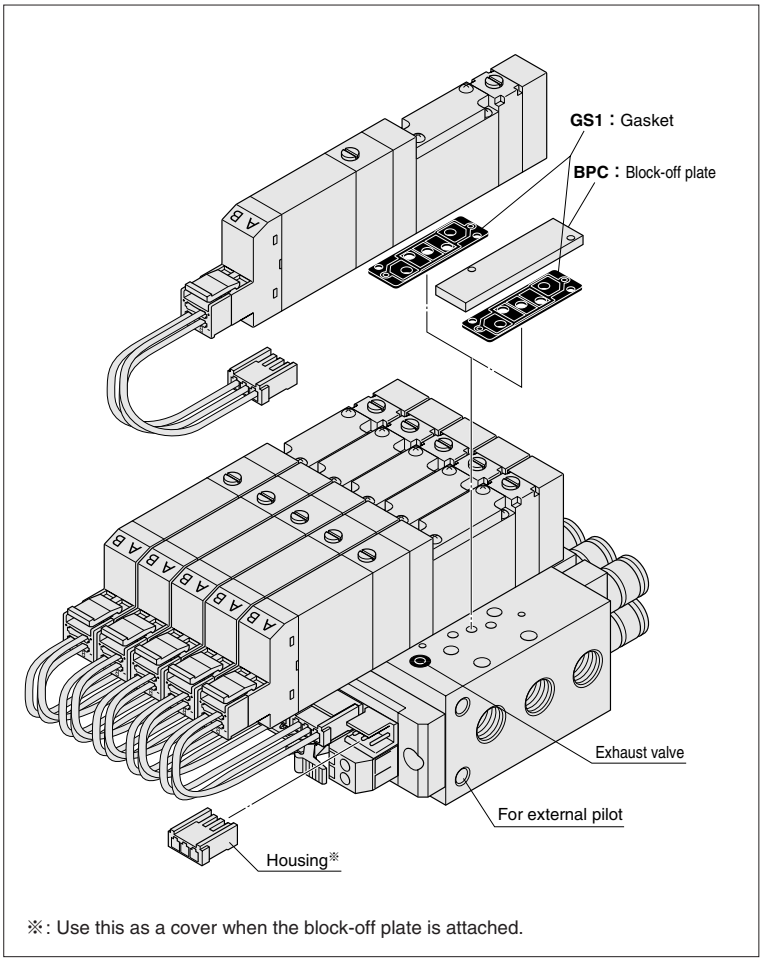
FZ□ - □

Valve specification
Blank： For **T1, T2, T3, T4, T5**
0： For **T0**

Connector specification
P10： For F10 series
Connector lead wire for PC board manifold
P15： For F15 series
Connector lead wire for PC board manifold



Note: White lead wire is not available for **FZ0-P□**.



※: Use this as a cover when the block-off plate is attached.

Individual air supply and exhaust spacer
(Spacer for non-plug-in type, gasket, exhaust valve, and 2 mounting screws)

F□Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width

Specification
NPM： Individual air supply spacer (with M5 female thread for F10)
NP6： Individual air supply spacer (with φ6 fitting for F15)
NP8： Individual air supply spacer (with φ8 fitting for F15)
NRM： Individual exhaust spacer (with M5 female thread for F10)
NR6： Individual exhaust spacer (with φ6 fitting for F15)
NR8： Individual exhaust spacer (with φ8 fitting for F15)

※For details, see p.509.

Muffler

KM - J□

Fitting size
6： Outer diameter φ6 (for individual exhaust spacer)
8： Outer diameter φ8 (for individual exhaust spacer)
10： Outer diameter φ10 (for individual exhaust spacer)
(Sales unit: Set of 10 mufflers)

Manifold Order Code Example
(8 units of F10 Series)

F10M8APL-F201-W

stn.1～4 F10T0-A1-PP-J5 DC24V
stn.5～7 F10T2-A1-PP-J6 DC24V
stn.8 F10BPC-J6

Note: This order code example has no relationship to the illustration at upper right.

Precautions for Order Codes

● **Orders for valves only**

Enter the code | Valve size | Valve specification | Pilot specification | Manual override | - | Valve outlet type | - **PP** | Voltage | to order.

When the lead wire for the PC board is not required, enter **-PN.**

● **Wiring connection specification**

-S (single wiring): Wiring for single solenoid only.
-W (double wiring): Wiring is always for the double solenoid, regardless of the mounted valve specifications.

PC Board Manifold F Type (Direct Piping Type) Order Codes

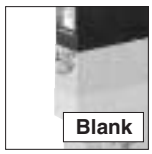
■Valve size

F10M
10mm [0.394in.] width
Effective area 5mm² (Cv: 0.28)

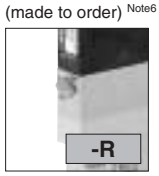
F15M
15mm [0.591in.] width
Effective area 10mm² (Cv: 0.56)

■Manual override

Manual override button



Manual override lever (made to order) Note6



■Valve outlet type

5-port specification

-FJ	With dual-use different size fitting block (direct piping type)	**F10**：φ4, φ6 **F15**：φ6, φ8
-FJ5	With single size fitting block (direct piping type)	**F10**：φ4 **F15**：φ6
-FJ6	With single size fitting block (direct piping type)	**F10**：φ6 **F15**：φ8
-FM	With female thread block (direct piping type)	**F10**：M5×0.8 **F15**：Rc1/8

3-port specification

-FJ5A	With single size fitting block, normally closed (NC) (direct piping type)	**F10**：φ4 **F15**：φ6
-FJ5B	With single size fitting block, normally open (NO) (direct piping type)	**F10**：φ4 **F15**：φ6
-FJ6A	With single size fitting block, normally closed (NC) (direct piping type)	**F10**：φ6 **F15**：φ8
-FJ6B	With single size fitting block, normally open (NO) (direct piping type)	**F10**：φ6 **F15**：φ8
-FMA	With female thread block, normally closed (NC) (direct piping type)	**F10**：M5×0.8 **F15**：Rc1/8
-FMB	With female thread block, normally open (NO) (direct piping type)	**F10**：M5×0.8 **F15**：Rc1/8

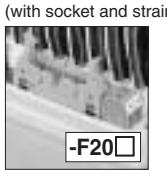
Caution: The 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

■Individual air supply and exhaust spacer

Blank : Without spacer
-NPM : Individual air supply spacer (with M5 female thread for F10)
-NP6 : Individual air supply spacer (with φ6 fitting for F15)
-NP8 : Individual air supply spacer (with φ8 fitting for F15)
-NRM : Individual exhaust spacer (with M5 female thread for F10)
-NR6 : Individual exhaust spacer (with φ6 fitting for F15)
-NR8 : Individual exhaust spacer (with φ8 fitting for F15)
For details, see p.509.

■Wiring specification (wiring block)

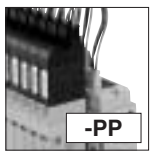
Flat cable connector (with socket and strain relief)



-F200：20-pin
-F201：20-pin
For details, see p.553.

■Wiring specification

S type plug connector
Lead wire for PC board



■Wiring connection specification

-S
Single wiring: Wiring as single solenoid only.
Note: This is not the same as packed wiring.

-W
Double wiring: Wiring is always for the double solenoid, regardless of the mounted valve type.

■Valve specification

T0 : 2-position, for single solenoid only
T1 : 2-position, single solenoid specification
T2 : 2-position, double solenoid specification
T3 : 3-position, closed center
T4 : 3-position, exhaust center
T5 : 3-position, pressure center

Note: Valves of different sizes cannot be mounted together on manifolds.

	Valve size	Valve units	Wiring specification	Wiring connection specification	Station	Valve size	Valve specification	Manual override	Valve outlet type	Wiring specification	Individual air supply and exhaust spacer	Voltage
	Manifold model				Mounting valve models							
Single wiring type Note1	F10M F15M	6 8 10 12 14 16 Note3	FP	-F200 -F201	-S	stn. 1 ⋮ stn.□ Note4	F10 F15	T0 T1 Note5	Blank -R Note6	-FJ -FJ5B -FJ5 -FJ6A -FJ6 -FJ6B -FM -FMA -FJ5A -FMB	-PP Note7	Blank -NPM -NRM -NP6 -NR6 -NP8 -NR8	DC24V DC12V
								BPC (for block-off plate)					
Double wiring type Note2	F10M F15M	6 8 Note3	FP	-F200 -F201	-W	stn. 1 ⋮ stn.□ Note4	F10 F15	T0 T3 T1 T4 T2 T5	Blank -R Note6	-FJ -FJ5B -FJ5 -FJ6A -FJ6 -FJ6B -FM -FMA -FJ5A -FMB	-PP Note7 Note8	Blank -NPM -NRM -NP6 -NR6 -NP8 -NR8	DC24V DC12V
								BPC (for block-off plate)					

Notes: 1. Wiring as single solenoid only. Note that this is not the same as packed wiring. The mounting valves are limited to single solenoid only (**T0, T1** specifications). Therefore, even if the **T1** specification valve is switched over to a double solenoid, no power will be applied to the B side solenoid.
2. Wiring is always for the double solenoid, regardless of the specifications of the mounted valve.
3. The number of units in terms of the wiring connection specifications are, for single wiring 6～16 (even numbers only), and for double wiring, 6 or 8.
4. Valve mounting location is from the left, with the solenoid on top, and the 4(A), 2(B) ports side in front.
5. The mounting valves are limited to **T0, T1** specifications only (single solenoid specifications). In addition, even if the **T1** specification valve is switched over to a double solenoid, no power will be applied to the B side solenoid.
6. The manual override lever is made to order. Consult us for delivery. When the valve specifications are **T1** or **T2**, the manual override lever is placed on the A side only.
7. Always enter **-PP**.
8. The lead wire on the solenoid B side (white) is not available in valve specification **T0**.

Additional Parts Order Codes for PC Board Manifold F Type

Gasket (gasket and exhaust valve)

F□Z - GS1

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width

Block-off plate
(block-off plate, 2 mounting screws, and housing)

F□BPC

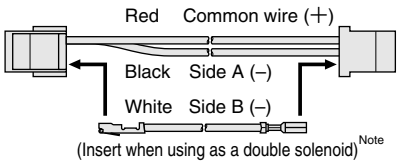
Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width

Connector-related order code

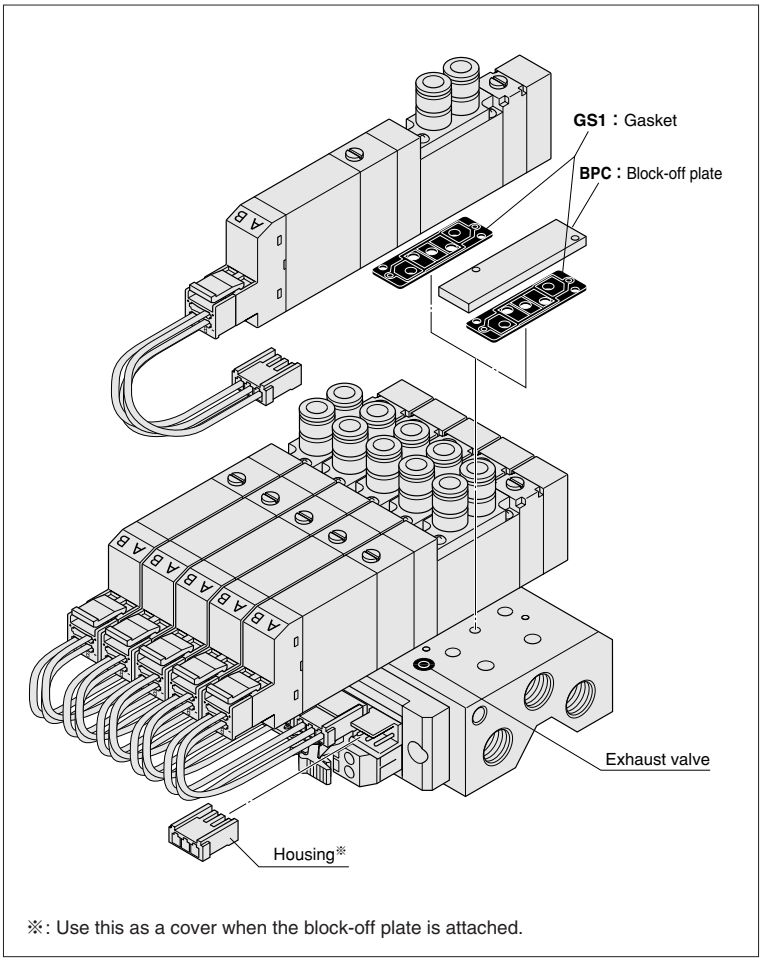
FZ□ - □

Valve specification
Blank： For **T1, T2, T3, T4, T5**
0： For **T0**

Connector specification
P10： For F10 series
Connector lead wire for PC board manifold
P15： For F15 series
Connector lead wire for PC board manifold



Note: White lead wire is not available for **FZ0-P□**.



※: Use this as a cover when the block-off plate is attached.

Individual air supply and exhaust spacer
(Spacer for non-plug-in type, gasket, exhaust valve, and 2 mounting screws)

F□Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width

Specification
NPM： Individual air supply spacer (with M5 female thread for F10)
NP6： Individual air supply spacer (with φ6 fitting for F15)
NP8： Individual air supply spacer (with φ8 fitting for F15)
NRM： Individual exhaust spacer (with M5 female thread for F10)
NR6： Individual exhaust spacer (with φ6 fitting for F15)
NR8： Individual exhaust spacer (with φ8 fitting for F15)

※For details, see p.509.

Muffler

KM - J□

Fitting size
6： Outer diameter φ6 (for individual exhaust spacer)
8： Outer diameter φ8 (for individual exhaust spacer)
10： Outer diameter φ10 (for individual exhaust spacer)
(Sales unit: Set of 10 mufflers)

Manifold Order Code Example
(8 units of F10 Series)

F10M8FP-F201-W

stn.1～4 **F10T0-FJ5-PP DC24V**
stn.5～7 **F10T2-FJ6-PP DC24V**
stn.8 **F10BPC**

Note: This order code example has no relationship to the illustration at upper right.

Precautions for Order Codes

● **Orders for valves only**

Enter the code [Valve size] [Valve specification] [Manual override] - [Valve outlet type] - **PP** [Voltage] to order.

When the lead wire for the PC board is not required, enter **-PN.**

● **Wiring connection specification**

-S (single wiring): Wiring for single solenoid only.
-W (double wiring): Wiring is always for the double solenoid, regardless of the mounted valve specifications.

Split Manifold Non-Plug-in Type Order Codes

■Valve size

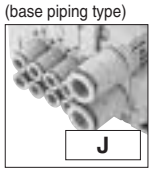
F10M
10mm [0.394in.] width
Effective area 5mm² 〔Cv: 0.28〕

F15M
15mm [0.591in.] width
Effective area 10mm² 〔Cv: 0.56〕

F18M
18mm [0.709in.] width
Effective area 18mm² 〔Cv: 1.0〕

■Manifold outlet specification

With dual-use different size fitting blocks (base piping type)

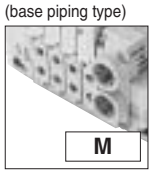


Outlet port fitting
F10 : φ4, φ6
F15 : φ6, φ8
F18 : φ8, φ10

With selectable fittings (base piping type)

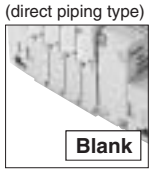
Outlet port should be selected in accordance with the manifold fitting specification

With female thread blocks (base piping type)



Outlet port female thread
F10 : M5×0.8
F15 : Rc1/8
F18 : Rc1/4

With plates (direct piping type)



■Pilot specification

Blank
Internal pilot manifold

G
External pilot manifold

■Piping block specification (supply and exhaust)

Different size fitting block
-JR : Dual-use different size fitting, right-side mounting
-JL : Dual-use different size fitting, left-side mounting
-JD : Dual-use different size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10, F15 : φ8, φ10 **F18 :** φ12 only

Female thread block
-MR : Female thread, right-side mounting
-ML : Female thread, left-side mounting
-MD : Female thread, both-side mounting
Female thread size (1(P), 3, 5(R) ports)
F10, F15 : Rc1/4 **F18 :** Rc3/8

Single size fitting block (Not available for F18)
-J5R : Single size fitting, right-side mounting
-J5L : Single size fitting, left-side mounting
-J5D : Single size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10 and **F15 :** φ8
-J6R : Single size fitting, right-side mounting
-J6L : Single size fitting, left-side mounting
-J6D : Single size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10 and **F15 :** φ10

	Manifold model					
	Valve size	Valve units		Manifold outlet specification	Pilot specification	Piping block specification
Base piping type	F10M F15M F18M	2 ⋮ 20	N	J M	Blank G	-JR -J5R Note1 -JL -J6R Note1 -JD -J5L Note1 -MR -J6L Note1 -ML -J5D Note1 -MD -J6D Note1
Base piping type single size fitting				L	Blank G	-JR -J5R Note1 -JL -J6R Note1 -JD -J5L Note1 -MR -J6L Note1 -ML -J5D Note1 -MD -J6D Note1
Direct piping type				Blank	Blank G	-JR -J5R Note1 -JL -J6R Note1 -JD -J5L Note1 -MR -J6L Note1 -ML -J5D Note1 -MD -J6D Note1

Note: 1. Not available for F18

Valve specification

T0 : 2-position, for single solenoid only
T1 : 2-position, single solenoid specification
T2 : 2-position, double solenoid specification
T3 : 3-position, closed center
T4 : 3-position, exhaust center
T5 : 3-position, pressure center

Operation type

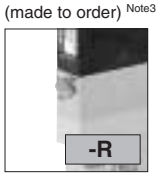
Blank
Internal pilot type Note6

G
External pilot type Note7
(for positive pressure)
※ No vacuum valve can be mounted.

Manual override

Manual override button

Manual override lever (made to order) Note3



Valve outlet type

-A1 With plate Note4 (base piping type)

5-port specification

-FJ	With dual-use different size fitting block (direct piping type)	**F10 :** ϕ4, ϕ6 **F15 :** ϕ6, ϕ8 **F18 :** ϕ8, ϕ10
-FJ5	With single size fitting block (direct piping type)	**F10 :** ϕ4 **F15 :** ϕ6 **F18 :** ϕ8
-FJ6	With single size fitting block (direct piping type)	**F10 :** ϕ6 **F15 :** ϕ8 **F18 :** ϕ10
-FM	With female thread block (direct piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8 **F18 :** Rc1/4

3-port specification

-FJ5A	With single size fitting block, normally closed (NC) (direct piping type)	**F10 :** ϕ4 **F15 :** ϕ6
-FJ5B	With single size fitting block, normally open (NO) (direct piping type)	**F10 :** ϕ4 **F15 :** ϕ6
-FJ6A	With single size fitting block, normally closed (NC) (direct piping type)	**F10 :** ϕ6 **F15 :** ϕ8
-FJ6B	With single size fitting block, normally open (NO) (direct piping type)	**F10 :** ϕ6 **F15 :** ϕ8
-FMA	With female thread block, normally closed (NC) (direct piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8
-FMB	With female thread block, normally open (NO) (direct piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8

Caution: The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

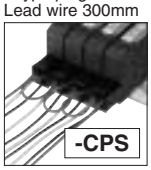
Wiring specification

S type plug connector
Without connector

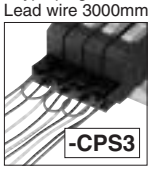
S type plug connector
Lead wire 300mm

S type plug connector
Lead wire 3000mm

Pre-wired positive common terminal
S type plug connector
Lead wire 300mm



Pre-wired positive common terminal
S type plug connector
Lead wire 3000mm



Manifold fitting specification

5-port specification

-J5	With single size fitting block (base piping type)	**F10 :** ϕ4 **F15 :** ϕ6 **F18 :** ϕ8
-J6	With single size fitting block (base piping type)	**F10 :** ϕ6 **F15 :** ϕ8 **F18 :** ϕ10
-M	With female thread block (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8 **F18 :** Rc1/4

3-port specification

-J5A	With single size fitting block, normally closed (NC) (base piping type)	**F10 :** ϕ4 **F15 :** ϕ6
-J5B	With single size fitting block, normally open (NO) (base piping type)	**F10 :** ϕ4 **F15 :** ϕ6
-J6A	With single size fitting block, normally closed (NC) (base piping type)	**F10 :** ϕ6 **F15 :** ϕ8
-J6B	With single size fitting block, normally open (NO) (base piping type)	**F10 :** ϕ6 **F15 :** ϕ8
-MA	With female thread block, normally closed (NC) (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8
-MB	With female thread block, normally open (NO) (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8

Caution: The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

Port isolator

Blank : Without port isolator
-SP : For 1(P) port Note5
-SR : For 3(R2), 5(R1) ports Note5
-SA : For 1(P), 3(R2), and 5(R1) ports Note5

Individual air supply and exhaust spacer

Blank : Without spacer
-NPM : Individual air supply spacer (with M5 female thread for F10)
-NP6 : Individual air supply spacer (with ϕ6 fitting for F15)
-NP8 : Individual air supply spacer (with ϕ8 fitting for F15 and F18)
-NP0 : Individual air supply spacer (with ϕ10 fitting for F18)
-NRM : Individual exhaust spacer (with M5 female thread for F10)
-NR6 : Individual exhaust spacer (with ϕ6 fitting for F15)
-NR8 : Individual exhaust spacer (with ϕ8 fitting for F15 and F18)
-NR0 : Individual exhaust spacer (with ϕ10 fitting for F18)

For details, see p.509.

Note: Valves of different sizes cannot be mounted together on manifolds.

Station	Valve size	Valve specification	Operation type	Manual override	Valve outlet type	Wiring specification	Manifold fitting specification	Individual air supply and exhaust spacer	Port isolator	Voltage
Mounting valve models										
stn. 1 ⋮ stn.□ Note2	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank Note6 G Note7	Blank -R Note3	-A1 Note4	-PN -PS -PS3 -CPS -CPS3		Blank -NPM -NRM -NP6 -NR6 -NP8 -NR8 -NP0 -NR0	Blank -SP Note5 -SR Note5 -SA Note5	DC24V DC12V AC100V
		BPN (for block-off plate)								
stn. 1 ⋮ stn.□ Note2	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank Note6 G Note7	Blank -R Note3	-A1 Note4	-PN -PS -PS3 -CPS -CPS3	-J5 -J6A -J6 -J6B -M -MA -J5A -MB -J5B	Blank -NPM -NRM -NP6 -NR6 -NP8 -NR8 -NP0 -NR0	Blank -SP Note5 -SR Note5 -SA Note5	DC24V DC12V AC100V
		BPN (for block-off plate)								
stn. 1 ⋮ stn.□ Note2	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank Note6 G Note7	Blank -R Note3	-FJ -FJ5B -FJ5 -FJ6A -FJ6 -FJ6B -FM -FMA -FJ5A -FMB	-PN -PS -PS3 -CPS -CPS3		Blank -NPM -NRM -NP6 -NR6 -NP8 -NR8 -NP0 -NR0	Blank -SP Note5 -SR Note5 -SA Note5	DC24V DC12V AC100V
		BPN (for block-off plate)								

Notes: 2. Valve mounting location is from the left, with the solenoid on top, and the 4(A), 2(B) ports side in front.
3. The manual override lever is made to order. Consult us for delivery. When the valve specifications are **T1** or **T2**, the manual override lever is placed on the A side only.
4. When selecting **J, M**, or **L** (base piping type) for the manifold outlet specification, always enter **-A1** (with plate) for the valve outlet type.
5. Port isolators can be installed only when piping blocks are mounted on both sides. In addition, only 1 port isolator can be mounted in 1 manifold for **-SA**, or 1 each port isolator for **-SP** and **-SR** for a total of 2 locations. When shipping, the designated port isolators are mounted between the designated station and the station to its immediate left (the next smaller stn. No.).
6. Cannot be mounted on the external pilot manifold.
7. Cannot be mounted on the internal pilot manifold.

Additional Parts Order Codes for Split Manifold Non-Plug-in Type

Parts for manifold

F □ Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Parts content
GS2 : Gasket (gasket and exhaust valve)
SP : Port isolator (for 1(P) port)
SR : Port isolator (for 3(R2), 5(R1) ports)
SA : Port isolator (for 1(P), 3(R2), 5(R1) ports)

Block-off plate (block-off plate, 2 mounting screws, and plug※)

F □ BP N

※: No plug is included with F18.

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

For non-plug-in

Connector-related order codes

FZ □ - □

300mm = 11.8in.
1500mm = 59in.
3000mm = 118in.

Valve specification
Blank : For **T1, T2, T3, T4, T5**
0 : For **T0**

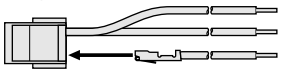
※For details, see p.506.

Connector specification
CP : Connector, lead wire length 300mm
CP3 : Connector, lead wire length 3000mm
CLN : Connector without lead wire (short bar, contacts included)
PA : Positive common A type, lead wire length 300mm※
PA3 : Positive common A type, lead wire length 3000mm※
PB : Positive common B type, lead wire length 300mm※
PB3 : Positive common B type, lead wire length 3000mm※
PC : Positive common C type, lead wire length 300mm※
PC3 : Positive common C type, lead wire length 3000mm※
CC1.5 : Cabtyre cable, length 1500mm Note※
CC3 : Cabtyre cable, length 3000mm Note※

Note: Not available for **T0**

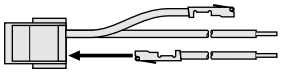
●Common connector assembly

A Type : FZ-PA□※



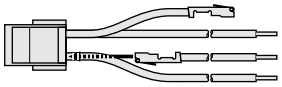
Red Common wire (+)
Black A side (–)
White B side (–) (Insert when using as double solenoid) Note

B Type : FZ-PB□※



Red Common wire (+)
Black A side (–)
White B side (–) (Insert when using as double solenoid) Note

C Type : FZ-PC□※



Red Common wire (+)
Black A side (–)
White B side (–) (Insert when using as double solenoid) Note
Red Common wire (+)

※: Lead wire length **Blank:** 300mm [11.8in.] **3:** 3000mm [118in.]

Note: White lead wire is not available with **FZ0-P□□**.

Valve base assembly (valve base and gasket)

F □ Z □ - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Piping specification
VJ : Dual-use different size fitting valve base
VJ5 : Single size fitting valve base F10: φ4, F15: φ6, F18: φ8
VJ6 : Single size fitting valve base F10: φ6, F15: φ8, F18: φ10
VJ5A : 3-port specification normally closed, single size fitting valve base F10: φ4, F15: φ6Note
VJ5B : 3-port specification normally open, single size fitting valve base F10: φ4, F15: φ6Note
VJ6A : 3-port specification normally closed, single size fitting valve base F10: φ6, F15: φ8Note
VJ6B : 3-port specification normally open, single size fitting valve base F10: φ6, F15: φ8Note
VM : Female thread valve base
VMA : 3-port specification normally closed, female thread valve baseNote
VMB : 3-port specification normally open, female thread valve baseNote
VP : Valve base plate

Note: Not available for F18

Pilot specification
Blank: Internal pilot※
G : External pilot (only for F10 and F15)
※ For F18, internal pilot and external pilot use are shareable.

Piping block assembly

F □ Z □ - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Piping specification
PJ: Dual-use different size fitting piping block (For F18, single size fitting φ12)
PJ5: Single size fitting piping block φ8 (Not available for F18)
PJ6: Single size fitting piping block φ10 (Not available for F18)
PM: Female thread piping block

Pilot specification
Blank : Internal pilot
G : External pilot

End blocks (one set of left and right)

F □ Z □ - E

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Pilot specification
Blank : Internal pilot※
G : External pilot (only for F10 and F15)
※: For F18, internal pilot and external pilot use are shareable.

Individual air supply and exhaust spacer

(Spacer for non-plug-in type, gasket, exhaust valve, and 2 mounting screws)

F □ Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Specification
NPM : Individual air supply spacer (with M5 female thread for F10)
NP6 : Individual air supply spacer (with φ6 fitting for F15)
NP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
NP0 : Individual air supply spacer (with φ10 fitting for F18)
NRM : Individual exhaust spacer (with M5 female thread for F10)
NR6 : Individual exhaust spacer (with φ6 fitting for F15)
NR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
NR0 : Individual exhaust spacer (with φ10 fitting for F18)

※For details, see p.509.

Muffler

KM - J □

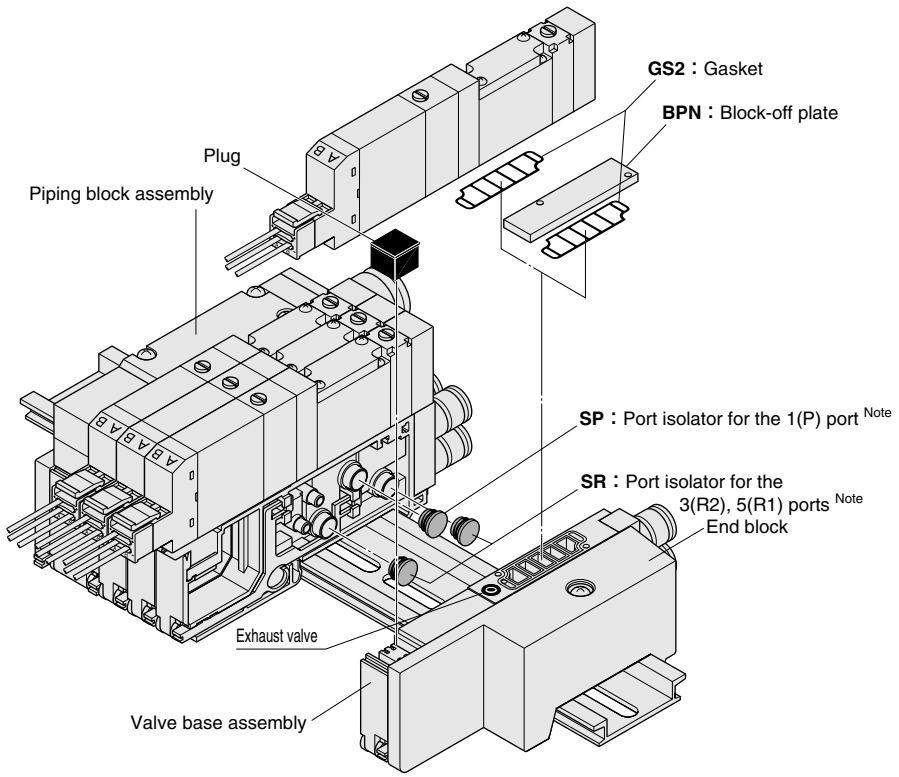
Fitting size
6 : Outer diameter φ6 (for individual exhaust spacer)
8 : Outer diameter φ8 (for individual exhaust spacer)
10 : Outer diameter φ10 (for F10, F15 and for individual exhaust spacer)
12 : Outer diameter φ12 (for F18)
(Sales unit: Set of 10 mufflers)

Connecting rod (F18 series only)

F18 Z - □ - □

Additional unit number
01～20 (01～04 for RH)
※For reduction of units, consult us.

Specification
RV: For valve base
RH: For piping and wiring base



Note: The F18 series port isolator looks different in appearance.
※Illustration shows the F10 series.

Manifold Order Code Example

(4 units of F10 Series)

F10M4NL-J5R

stn.1～2	**F10T0-A1-PS-J5 DC24V**
stn.3	**F10T2-A1-PS-J6 DC24V**
stn.4	**F10BPN-J6**

Note: This order code example has no relationship to the above illustration.

Precautions for Order Codes

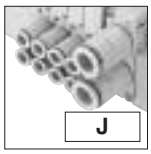
● **Orders for valves only**

Place orders from "Single Valve Unit Order Codes" on p.525.
However, **Blank, A2, F3, F4, F5, F6, F4A, F4B, F5A, F5B, F6A,** and **F6B** cannot be selected for the valve outlet type. And for the wiring specification, **Blank, PL**, and **PL3** cannot be selected. In addition, for common terminal wiring connections, separately order the common connector assemblies listed on the previous page.

Split Manifold Plug-in Type Order Codes

■Manifold outlet specification

With dual-use different size fitting blocks (base piping type)

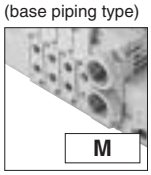


Outlet port fitting
F10 : ϕ4, ϕ6
F15 : ϕ6, ϕ8
F18 : ϕ8, ϕ10

With selectable fittings (base piping type)

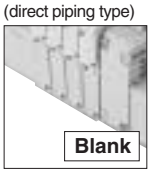
Outlet port should be selected in accordance with the manifold fitting specification

With female thread blocks (base piping type)



Outlet port female thread
F10 : M5×0.8
F15 : Rc1/8
F18 : Rc1/4

With plates (direct piping type)



■Pilot specification

Blank
Internal pilot manifold

G
External pilot manifold

■Piping block specification (supply and exhaust)

Different size fitting block
-JR : Dual-use different size fitting, right-side mounting
-JL : Dual-use different size fitting, left-side mounting
-JD : Dual-use different size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10, F15 : ϕ8, ϕ10 **F18 :** ϕ12 only

Female thread block
-MR : Female thread, right-side mounting
-ML : Female thread, left-side mounting
-MD : Female thread, both-side mounting
Female thread size (1(P), 3, 5(R) ports)
F10, F15 : Rc1/4 **F18 :** Rc3/8

Single size fitting block
(Not available for F18)
-J5R : Single size fitting, right-side mounting
-J5L : Single size fitting, left-side mounting
-J5D : Single size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports) **F10** and **F15 :** ϕ8
-J6R : Single size fitting, right-side mounting
-J6L : Single size fitting, left-side mounting
-J6D : Single size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10 and **F15 :** ϕ10

■Wiring specification (wiring block)

Flat cable connector (with socket and strain relief)

-F100 : 10-pin
-F101 : 10-pin
-F200 : 20-pin
-F201 : 20-pin
-F260 : 26-pin
For details, see p.555.

D-sub connector

(M2.6 mounting screws)
-D250 : 25-pin
-D251 : 25-pin
For details, see p.555.

Terminal block (19 terminals, M3 screws)

Also can provide the terminal block with cover.[Note4]

■Wiring connection specification

Blank
Packed wiring: Wiring is made in accordance with the mounted valve specifications.

-W
Double wiring: Wiring is always for the double solenoid, regardless of the specifications of the mounted valve.

■Wiring position (wiring block)

Blank : Left-side mounting
-R : Right-side mounting

■Valve size

F10M
10mm [0.394in.] width
Effective area 5mm² 〔Cv: 0.28〕

F15M
15mm [0.591in.] width
Effective area 10mm² 〔Cv: 0.56〕

F18M
18mm [0.709in.] width
Effective area 18mm² 〔Cv: 1.0〕

	Valve size	Valve units		Manifold outlet specification	Pilot specification	Piping block specification	Wiring specification	Wiring connection specification	Wiring position	Voltage
	Manifold model									
Base piping type	F10M F15M F18M	2 ⋮ □ Note1	P	J M	Blank G	-JR -J5R Note3 -JL -J6R Note3 -JD -J5L Note3 -MR -J6L Note3 -ML -J5D Note3 -MD -J6D Note3	-F100 -D250 -F101 -D251 -F200 -T200 -F201 -F260	Blank -W	Blank -R	DC24V DC12V AC100V Note2
Base piping type selectable fitting	F10M F15M F18M	2 ⋮ □ Note1	P	L	Blank G	-JR -J5R Note3 -JL -J6R Note3 -JD -J5L Note3 -MR -J6L Note3 -ML -J5D Note3 -MD -J6D Note3	-F100 -D250 -F101 -D251 -F200 -T200 -F201 -F260	Blank -W	Blank -R	DC24V DC12V AC100V Note2
Direct piping type	F10M F15M F18M	2 ⋮ □ Note1	P	Blank	Blank G	-JR -J5R Note3 -JL -J6R Note3 -JD -J5L Note3 -MR -J6L Note3 -ML -J5D Note3 -MD -J6D Note3	-F100 -D250 -F101 -D251 -F200 -T200 -F201 -F260	Blank -W	Blank -R	DC24V DC12V AC100V Note2

Notes: 1. For the maximum number of units, see the table for maximum number of valve units by wiring specification, on p.543.
2. AC100V is available only for the **-D250**, **-D251** (D-sub connector) and **-T200** (terminal block) wiring specifications.
3. Not available for F18.
4. The terminal block with cover (code: enter **-139W** to the end of the manifold code) can also be provided as a made to order item. For details, consult us.

■Valve specification

T0 : 2-position, for single solenoid only
T1 : 2-position, single solenoid specification
T2 : 2-position, double solenoid specification
T3 : 3-position, closed center
T4 : 3-position, exhaust center
T5 : 3-position, pressure center

■Operation type

Blank
Internal pilot type Note10

G
External pilot type Note11
(for positive pressure)
※ No vacuum valve can be mounted.

■Manual override

Manual override button

Manual override lever (made to order) Note8

■Valve outlet type

-A1 With plate Note6 (base piping type)

5-port specification

-FJ With dual-use different size fitting block (direct piping type)
F10 : φ4, φ6
F15 : φ6, φ8
F18 : φ8, φ10

-FJ5 With single size fitting block (direct piping type)
F10 : φ4
F15 : φ6
F18 : φ8

-FJ6 With single size fitting block (direct piping type)
F10 : φ6
F15 : φ8
F18 : φ10

-FM With female thread block (direct piping type)
F10 : M5×0.8
F15 : Rc1/8
F18 : Rc1/4

3-port specification

-FJ5A With single size fitting block, normally closed (NC) (direct piping type)
F10 : φ4
F15 : φ6

-FJ5B With single size fitting block, normally open (NO) (direct piping type)
F10 : φ4
F15 : φ6

-FJ6A With single size fitting block, normally closed (NC) (direct piping type)
F10 : φ6
F15 : φ8

-FJ6B With single size fitting block, normally open (NO) (direct piping type)
F10 : φ6
F15 : φ8

-FMA With female thread block, normally closed (NC) (direct piping type)
F10 : M5×0.8
F15 : Rc1/8

-FMB With female thread block, normally open (NO) (direct piping type)
F10 : M5×0.8
F15 : Rc1/8

Caution: The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

■Manifold fitting specification

5-port specification

-J5 With single size fitting block (base piping type)
F10 : φ4
F15 : φ6
F18 : φ8

-J6 With single size fitting block (base piping type)
F10 : φ6
F15 : φ8
F18 : φ10

-M With female thread block (base piping type)
F10 : M5×0.8
F15 : Rc1/8
F18 : Rc1/4

3-port specification

-J5A With single size fitting block, normally closed (NC) (base piping type)
F10 : φ4
F15 : φ6

-J5B With single size fitting block, normally open (NO) (base piping type)
F10 : φ4
F15 : φ6

-J6A With single size fitting block, normally closed (NC) (base piping type)
F10 : φ6
F15 : φ8

-J6B With single size fitting block, normally open (NO) (base piping type)
F10 : φ6
F15 : φ8

-MA With female thread block, normally closed (NC) (base piping type)
F10 : M5×0.8
F15 : Rc1/8

-MB With female thread block, normally open (NO) (base piping type)
F10 : M5×0.8
F15 : Rc1/8

Caution: The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

■Port isolator

Blank : Without port isolator
-SP : For 1(P) port Note9
-SR : For 3(R2), 5(R1) ports Note9
-SA : For 1(P), 3(R2), 5(R1) ports Note9

■Individual air supply and exhaust spacer

Blank : Without spacer
-PPM : Individual air supply spacer (with M5 female thread for F10)
-PP6 : Individual air supply spacer (with φ6 fitting for F15)
-PP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
-PP0 : Individual air supply spacer (with φ10 fitting for F18)
-PRM : Individual exhaust spacer (with M5 female thread for F10)
-PR6 : Individual exhaust spacer (with φ6 fitting for F15)
-PR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
-PR0 : Individual exhaust spacer (with φ10 fitting for F18)
For details, see p.509.

Note: Valves of different sizes cannot be mounted together on manifolds.

Station	Valve size	Valve specification	Operation type	Manual override	Valve outlet type	Manifold fitting specification	Individual air supply and exhaust spacer	Port isolator	Voltage
Mounting valve models									
stn. 1 ⋮ stn.□ Note5	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank Note10 G Note11	Blank -R Note8	-A1 Note6		Blank -PPM -PRM -PP6 -PR6 -PP8 -PR8 -PP0 -PR0	Blank -SP Note9 -SR Note9 -SA Note9	DC24V DC12V Note2 AC100V
		BPP (for block-off plate) Note7							
stn. 1 ⋮ stn.□ Note5	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank Note10 G Note11	Blank -R Note8	-A1 Note6	-J5 -J6A -J6 -J6B -M -MA -J5A -MB -J5B	Blank -PPM -PRM -PP6 -PR6 -PP8 -PR8 -PP0 -PR0	Blank -SP Note9 -SR Note9 -SA Note9	DC24V DC12V Note2 AC100V
		BPP (for block-off plate) Note7							
stn. 1 ⋮ stn.□ Note5	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank Note10 G Note11	Blank -R Note8	-FJ -FJ5B -FJ5 -FJ6A -FJ6 -FJ6B -FM -FMA -FJ5A -FMB		Blank -PPM -PRM -PP6 -PR6 -PP8 -PR8 -PP0 -PR0	Blank -SP Note9 -SR Note9 -SA Note9	DC24V DC12V Note2 AC100V
		BPP (for block-off plate) Note7							

Notes: 5. Valve mounting location is from the left, with the solenoid on top, and the 4(A), 2(B) ports side in front.
6. When selecting **J**, **M**, or **L** (base piping type) for the manifold outlet specification, always enter **-A1** (with plate) for the valve outlet type.
7. Caution should be exercised that the block-off plate wiring is always double wiring (allocated 2 control pins at 1 stn.), regardless of the wiring connection specification.
8. The manual override lever is made to order. Consult us for delivery. When the valve specifications are **T1** or **T2**, the manual override lever is placed on the A side only.
9. Port isolators can be installed only when piping blocks are mounted on both sides. In addition, only 1 port isolator can be mounted in 1 manifold for **-SA**, or 1 each port isolator for **-SP** and **-SR** for a total of 2 locations. When shipping, the designated port isolators are mounted between the designated station and the station to its immediate left (the next smaller stn. No.).
10. Cannot be mounted on the external pilot manifold.
11. Cannot be mounted on the internal pilot manifold.

Additional Parts Order Codes for Split Manifold Plug-in Type

Parts for manifold

F□Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Parts content
GS2：Gasket (gasket and exhaust valve)
SP：Port isolator (for 1(P) port)
SR：Port isolator (for 3(R2), 5(R1) ports)
SA：Port isolator (for 1(P), 3(R2), 5(R1) ports)

Block-off plate (block-off plate, 2 mounting screws, and plug)

F□BP P

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

For plug-in

Valve base assembly (valve base, gasket, lead wire, and plug-in connector)

F□Z□ - □ - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Pilot specification
Blank：Internal pilot※
G：External pilot (only for F10 and F15)
※: For F18, internal pilot and external pilot use are shareable.

Wiring specification
D: For D-sub connector
F: For flat cable connector, terminal block

Piping specification
VJ：Dual-use different size fitting valve base
VJ5：Single size fitting valve base F10: φ4, F15: φ6, F18: φ8
VJ6：Single size fitting valve base F10: φ6, F15: φ8, F18: φ10
VJ5A：3-port valve specification normally closed, single size fitting valve base F10: φ4, F15: φ6Note
VJ5B：3-port valve specification normally open, single size fitting valve base F10: φ4, F15: φ6Note
VJ6A：3-port valve specification normally closed, single size fitting valve base F10: φ6, F15: φ8Note
VJ6B：3-port valve specification normally open, single size fitting valve base F10: φ6, F15: φ8Note
VM：Female thread valve base
VMA：3-port valve specification normally closed, female thread valve baseNote
VMB：3-port valve specification normally open, female thread valve baseNote
VP：Valve base plate
Note: Not available for F18

Piping block assembly

F□Z□ - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Piping specification
PJ：Dual-use different size fitting piping block (for F10 and F15)
PJ5：Single size fitting piping block φ8 (Not available for F18)
PJ6：Single size fitting piping block φ10 (Not available for F18)
PM：Female thread piping block (for F10, F15)
PJP：Fitting piping block (for F18 only)
PMP：Female thread piping block (for F18 only)

Pilot specification
Blank：Internal pilot
G：External pilot

End blocks (one set of left and right)

F□Z□ - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

End block specification
E：For F10, F15
EP：For F18

Pilot specification
Blank：Internal pilot※
G：External pilot (only for F10 and F15)
※: For F18, internal pilot and external pilot use are shareable.

Wiring block assembly (one set)

F□Z□ - □ - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Pilot specification
Blank：Internal pilot※
G：External pilot (Only for F10 and F15)
※ For F18, internal pilot and external pilot use are shareable.

Voltage (Not required for T200)
DC24
DC12
AC100（for **D250,D251** only）

Piping specification
F100：Flat cable connector (DC specification)
F101：Flat cable connector (DC specification)
F200：Flat cable connector (DC specification)
F201：Flat cable connector (DC specification)
F260：Flat cable connector (DC specification)
D250：D-sub connector
D251：D-sub connector
T200L：Terminal block for left-side mounting
T200R：Terminal block for right-side mounting

Individual air supply and exhaust spacer

(Spacer for plug-in type, gasket, exhaust valve, and 2 mounting screws)

F□Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Specification
PPM：Individual air supply spacer (with M5 female thread for F10)
PP6：Individual air supply spacer (with φ6 fitting for F15)
PP8：Individual air supply spacer (with φ8 fitting for F15 and F18)
PP0：Individual air supply spacer (with φ10 fitting for F18)
PRM：Individual exhaust spacer (with M5 female thread for F10)
PR6：Individual exhaust spacer (with φ6 fitting for F15)
PR8：Individual exhaust spacer (with φ8 fitting for F15 and F18)
PR0：Individual exhaust spacer (with φ10 fitting for F18)

※For details, see p.509.

Muffler

KM - J□

Fitting size
6：Outer diameter φ6 (for individual exhaust spacer)
8：Outer diameter φ8 (for individual exhaust spacer)
10：Outer diameter φ10 (for F10, F15 and for individual exhaust spacer)
12：Outer diameter φ12 (for F18)
(Sales unit: Set of 10 mufflers)

Connecting rod (F18 series only)

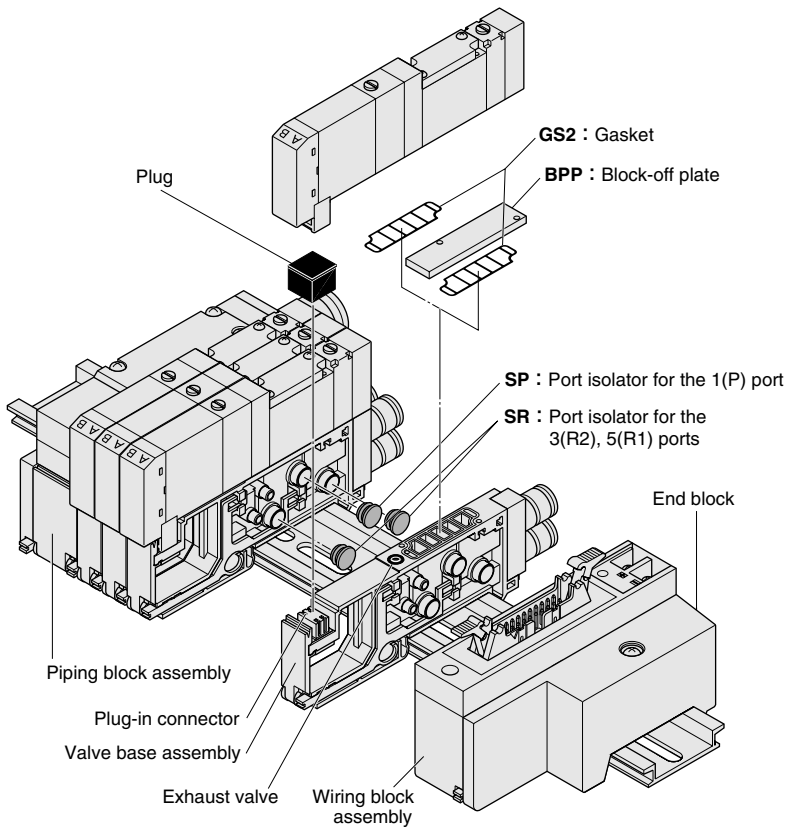
F18Z - □ - □

Number of additional units
01～20 (01～04 for RH)
※Example: To add 2 valve units, enter **-02**.
※For reduction of units, consult us.

Specification
RV: For valve base
RH: For piping and wiring base

■Table for maximum number of valve units by wiring specification

Wiring specification	Max. outputs	Maximum number of units: Wiring connection specification: Packed wiring (**Blank**)	Maximum number of units: Wiring connection specification: Double wiring (**-W**)
F100 Flat cable (10P)	8	Varies depending on the number of mounted single solenoids, double solenoids, and block-off plates. The number of controlled solenoids should be designated as the maximum number of outputs or less.	4 units
F101 Flat cable (10P)	8		4 units
F200 Flat cable (20P)	16		8 units
F201 Flat cable (20P)	16		8 units
F260 Flat cable (26P)	20		10 units
D250 D-sub connector (25P)	16		8 units
D251 D-sub connector (25P)	20		10 units
T200 Terminal block (19 terminals)	18		9 units



Note: The F18 series port isolator looks different in appearance.
※Illustration shows the F10 series.

Manifold Order Code Example

（12 units of F10 Series）

F10M12PL-J5R-F201 DC24V

stn.1～8 F10T0-A1-J5 DC24V
stn.9～11 F10T2-A1-J6 DC24V
stn.12 F10BPP-J6

Note: This order code example has no relationship to the above illustration.

Precautions for Order Codes

●**Orders for valves only**

Place orders from “Single Valve Unit Order Codes” on p.525.
However, **Blank, A2, F3, F4, F5, F6, F4A, F4B, F5A, F5B, F6A,** and **F6B** cannot be selected for the valve outlet type. For the wiring specification, **Blank** is the only selection.

●**Wiring connection specification**

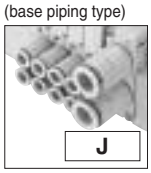
Blank (packed wiring) : Wiring is made in accordance with the mounted valve specifications.
-W (double wiring) : Wiring is always for the double solenoid, regardless of the mounted valve specifications.

Serial Transmission Compatible Manifold Order Codes

※For the order code for the OMRON CompoBus/D, see p.549.

■Manifold outlet specification

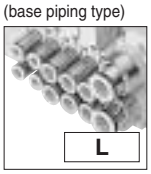
With dual-use different size fitting blocks (base piping type)



J

Outlet port fitting
F10 : ϕ4, ϕ6
F15 : ϕ6, ϕ8
F18 : ϕ8, ϕ10

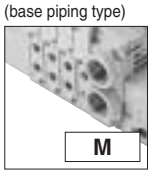
With selectable fittings (base piping type)



L

Outlet port should be selected in accordance with the manifold fitting specification

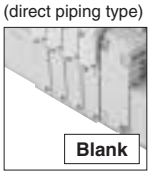
With female thread blocks (base piping type)



M

Outlet port female thread
F10 : M5×0.8
F15 : Rc1/8
F18 : Rc1/4

With plates (direct piping type)



Blank

■Pilot specification

Blank
Internal pilot manifold

G
External pilot manifold

■Piping block specification (supply and exhaust)

Different size fitting block
-JR : Dual-use different size fitting, right-side mounting
-JL : Dual-use different size fitting, left-side mounting
-JD : Dual-use different size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10, F15: ϕ8, ϕ10 **F18:** ϕ12 only

Female thread block
-MR : Female thread, right-side mounting
-ML : Female thread, left-side mounting
-MD Female thread, both-side mounting
Female thread size (1(P), 3, 5(R) ports)
F10, F15: Rc1/4 **F18:** Rc3/8

Single size fitting block
(Not available for F18)
-J5R : Single size fitting, right-side mounting
-J5L : Single size fitting, left-side mounting
-J5D : Single size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10 and **F15:** ϕ8
-J6R : Single size fitting, right-side mounting
-J6L : Single size fitting, left-side mounting
-J6D : Single size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10 and **F15:** ϕ10

■Transmission block specification

※ These are the serial transmission block specifications compatible with each system.

F10, F15 series

For details, see p.518～520.

●Mounted on the DIN rail at shipping.

F18 series

For details, see p.518～520.

-01 : For UNI-WIRE System (16 outputs)
-02 : For UNI-WIRE System (8 outputs)
-11 : For Mitsubishi Electric MELSECNET/MINI-S3
-21 : For OMRON SYSBUS Wire System
-31 : For OMRON B7A Link Terminal (Standard)
-32 : For OMRON B7A Link Terminal (High speed)
-41 : For KOYO ELECTRONICS INDUSTRIES SA Bus (16 outputs)
-42 : For KOYO ELECTRONICS INDUSTRIES SA Bus (8 outputs)
-51 : For SUNX S-LINK (16 outputs)
-52 : For SUNX S-LINK (8 outputs)
-61 : For Mitsubishi Electric MELSEC I/O LINK
-71 : For Fuji Electric FA Components & Systems T Link Mini
-81 : For KEYENCE KZ-R
-A1 : For OMRON CompoBus/S (16 outputs)
-A2 : For OMRON CompoBus/S (8 outputs)
-B1 : For Mitsubishi Electric CC-Link

■Wiring connection specification

Blank
Packed wiring: Wiring is made in accordance with the mounted valve specifications.

-W
Double wiring: Wiring is always for the double solenoid, regardless of the specifications of the mounted valve.

■Wiring position (transmission block)

Blank : Left-side mounting
-R : Right-side mounting

■Valve size

F10M
10mm [0.394in.] width
Effective area 5mm² 〔Cv: 0.28〕

F15M
15mm [0.591in.] width
Effective area 10mm² 〔Cv: 0.56〕

F18M
18mm [0.709in.] width
Effective area 18mm² 〔Cv: 1.0〕

Valve size	Valve units	Manifold outlet specification	Pilot specification	Piping block specification	Transmission block specification	Wiring connection specification	Wiring position
Manifold model							
Base piping type	F10M F15M F18M	J M	Blank G	-JR -J5R[Note2] -JL -J6R[Note2] -JD -J5L[Note2] -MR -J6L[Note2] -ML -J5D[Note2] -MD -J6D[Note2]	-01 -41 -81 -02 -42 -A1 -11 -51 -A2 -21 -52 -B1 -31 -61 -32 -71	Blank -W	Blank -R
Base piping type selectable fitting	F10M F15M F18M	L	Blank G	-JR -J5R[Note2] -JL -J6R[Note2] -JD -J5L[Note2] -MR -J6L[Note2] -ML -J5D[Note2] -MD -J6D[Note2]	-01 -41 -81 -02 -42 -A1 -11 -51 -A2 -21 -52 -B1 -31 -61 -32 -71	Blank -W	Blank -R
Direct piping type	F10M F15M F18M	Blank	Blank G	-JR -J5R[Note2] -JL -J6R[Note2] -JD -J5L[Note2] -MR -J6L[Note2] -ML -J5D[Note2] -MD -J6D[Note2]	-01 -41 -81 -02 -42 -A1 -11 -51 -A2 -21 -52 -B1 -31 -61 -32 -71	Blank -W	Blank -R

Valve units
2 ⋮ □ Note1

Manifold model
S

Notes: 1. To determine the maximum number of units, see the table for maximum number of valve units by transmission block specification, on p.547.
2. Not available for F18

■Valve specification

T0 : 2-position, for single solenoid only
T1 : 2-position, single solenoid specification
T2 : 2-position, double solenoid specification
T3 : 3-position, closed center
T4 : 3-position, exhaust center
T5 : 3-position, pressure center

■Operation type

Blank
Internal pilot type[Note8]

G
External pilot type[Note9]
(for positive pressure)
※ No vacuum valve can be mounted.

■Manual override

Manual override button

Manual override lever (made to order) [Note6]

■Valve outlet type

-A1 With plate [Note4] (base piping type)

5-port specification

-FJ With dual-use different size fitting block (direct piping type) **F10** : φ4, φ6 **F15** : φ6, φ8 **F18** : φ8, φ10

-FJ5 With single size fitting block (direct piping type) **F10** : φ4 **F15** : φ6 **F18** : φ8

-FJ6 With single size fitting block (direct piping type) **F10** : φ6 **F15** : φ8 **F18** : φ10

-FM With female thread block (direct piping type) **F10** : M5×0.8 **F15** : Rc1/8 **F18** : Rc1/4

3-port specification

-FJ5A With single size fitting block, normally closed (NC) (direct piping type) **F10** : φ4 **F15** : φ6

-FJ5B With single size fitting block, normally open (NO) (direct piping type) **F10** : φ4 **F15** : φ6

-FJ6A With single size fitting block, normally closed (NC) (direct piping type) **F10** : φ6 **F15** : φ8

-FJ6B With single size fitting block, normally open (NO) (direct piping type) **F10** : φ6 **F15** : φ8

-FMA With female thread block, normally closed (NC) (direct piping type) **F10** : M5×0.8 **F15** : Rc1/8

-FMB With female thread block, normally open (NO) (direct piping type) **F10** : M5×0.8 **F15** : Rc1/8

Caution: The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

■Manifold fitting specification

5-port specification

-J5 With single size fitting block (base piping type) **F10** : φ4 **F15** : φ6 **F18** : φ8

-J6 With single size fitting block (base piping type) **F10** : φ6 **F15** : φ8 **F18** : φ10

-M With female thread block (base piping type) **F10** : M5×0.8 **F15** : Rc1/8 **F18** : Rc1/4

3-port specification

-J5A With single size fitting block, normally closed (NC) (base piping type) **F10** : φ4 **F15** : φ6

-J5B With single size fitting block, normally open (NO) (base piping type) **F10** : φ4 **F15** : φ6

-J6A With single size fitting block, normally closed (NC) (base piping type) **F10** : φ6 **F15** : φ8

-J6B With single size fitting block, normally open (NO) (base piping type) **F10** : φ6 **F15** : φ8

-MA With female thread block, normally closed (NC) (base piping type) **F10** : M5×0.8 **F15** : Rc1/8

-MB With female thread block, normally open (NO) (base piping type) **F10** : M5×0.8 **F15** : Rc1/8

Caution: The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

■Port isolator

Blank : Without port isolator
-SP : For 1(P) port [Note7]
-SR : For 3(R2), 5(R1) ports [Note7]
-SA : For 1(P), 3(R2), 5(R1) ports [Note7]

■Individual air supply and exhaust spacer

Blank : Without spacer
-PPM : Individual air supply spacer (with M5 female thread for F10)
-PP6 : Individual air supply spacer (with φ6 fitting for F15)
-PP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
-PP0 : Individual air supply spacer (with φ10 fitting for F18)
-PRM : Individual exhaust spacer (with M5 female thread for F10)
-PR6 : Individual exhaust spacer (with φ6 fitting for F15)
-PR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
-PR0 : Individual exhaust spacer (with φ10 fitting for F18)
For details, see p.509.

Note: Valves of different sizes cannot be mounted together on manifolds.

Station	Valve size	Valve specification	Operation type	Manual override	Valve outlet type	Manifold fitting specification	Individual air supply and exhaust spacer	Port isolator	Voltage
Mounting valve models									
stn. 1 ⋮ stn.□ Note3	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank[Note8] G[Note9]	Blank -R[Note6]	-A1[Note4]		Blank -PPM -PRM -PP6 -PR6 -PP8 -PR8 -PP0 -PR0	Blank -SP[Note7] -SR[Note7] -SA[Note7]	DC24V
		BPP (for block-off plate)[Note5]							
stn. 1 ⋮ stn.□ Note3	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank[Note8] G[Note9]	Blank -R[Note6]	-A1[Note4]	-J5 -J6A -J6 -J6B -M -MA -J5A -MB -J5B	Blank -PPM -PRM -PP6 -PR6 -PP8 -PR8 -PP0 -PR0	Blank -SP[Note7] -SR[Note7] -SA[Note7]	DC24V
		BPP (for block-off plate)[Note5]							
stn. 1 ⋮ stn.□ Note3	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank[Note8] G[Note9]	Blank -R[Note6]	-FJ -FJ5B -FJ5 -FJ6A -FJ6 -FJ6B -FM -FMA -FJ5A -FMB		Blank -PPM -PRM -PP6 -PR6 -PP8 -PR8 -PP0 -PR0	Blank -SP[Note7] -SR[Note7] -SA[Note7]	DC24V
		BPP (for block-off plate)[Note5]							

Notes: 3. Valve mounting location is from the left, with the solenoid on top, and the 4(A), 2(B) ports side in front.
4. When selecting **J**, **M**, or **L** (base piping type) for the manifold outlet specifications, always enter **-A1** (with plate) for the valve outlet type.
5. Caution should be exercised that the block-off plate wiring is always double wiring (allocated 2 control pins at 1 stn.), regardless of the wiring connection specification.
6. The manual override lever is made to order. Consult us for delivery. When the valve specifications are **T1** or **T2**, the manual override lever is placed on the A side only.
7. Port isolators can be installed only when piping blocks are mounted on both sides. In addition, only 1 port isolator can be mounted in 1 manifold for **-SA**, or 1 each port isolator for **-SP** and **-SR** for a total of 2 locations. When shipping, the designated port isolators are mounted between the designated station and the station to its immediate left (the next smaller stn. No.).
8. Cannot be mounted on the external pilot manifold.
9. Cannot be mounted on the internal pilot manifold.

Additional Parts Order Codes for Serial Transmission Compatible Manifold

Parts for manifold

F□Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Parts content
GS2 : Gasket (gasket and exhaust valve)
SP : Port isolator (for 1(P) port)
SR : Port isolator (for 3(R2), 5(R1) ports)
SA : Port isolator (for 1(P), 3(R2), 5(R1) ports)
Only for F10, F15 series

Block-off plate (block-off plate, 2 mounting screws, and plug)

F□BPP

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Individual air supply and exhaust spacer

(Spacer for plug-in type, gasket, exhaust valve, and 2 mounting screws)

F□Z - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
18：18mm [0.709in.] width

Specification
PPM : Individual air supply spacer (with M5 female thread for F10)
PP6 : Individual air supply spacer (with ϕ6 fitting for F15)
PP8 : Individual air supply spacer (with ϕ8 fitting for F15 and F18)
PP0 : Individual air supply spacer (with ϕ10 fitting for F18)
PRM : Individual exhaust spacer (with M5 female thread for F10)
PR6 : Individual exhaust spacer (with ϕ6 fitting for F15)
PR8 : Individual exhaust spacer (with ϕ8 fitting for F15 and F18)
PR0 : Individual exhaust spacer (with ϕ10 fitting for F18)

※For details, see p.509.

Serial transmission block (single unit)

YS2□□

Wiring position
L: For stand-alone type, left-side mounting (for F10, F15 series)※
R: For stand-alone type, right-side mounting (for F10, F15 series)※
S: For monoblock type, left-side mounting (for F18 series)
T: For monoblock type, right-side mounting (for F18 series)
※: DIN rail (length 75mm [2.95in.]) is also provided.

Transmission block specification
01 : For UNI-WIRE System (16 outputs)
02 : For UNI-WIRE System (8 outputs)
11 : For Mitsubishi Electric MELSECNET/MINI-S3
21 : For OMRON SYSBUS Wire System
31 : For OMRON B7A Link Terminal (Standard)
32 : For OMRON B7A Link Terminal (High Speed)
41 : For KOYO ELECTRONICS INDUSTRIES SA Bus (16 outputs)
42 : For KOYO ELECTRONICS INDUSTRIES SA Bus (8 outputs)
51 : For SUNX S-LINK (16 outputs)
52 : For SUNX S-LINK (8 outputs)
61 : For Mitsubishi Electric MELSEC I/O LINK
71 : For Fuji Electric FA Components & Systems T Link Mini
81 : For KEYENCE KZ-R
A1 : For OMRON CompoBus/S (16 outputs)
A2 : For OMRON CompoBus/S (8 outputs)
B1 : For Mitsubishi Electric CC-Link

Valve base assembly※ (valve base, gasket, lead wire, and plug-in connector)

F□Z□ - □ - F

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width

Pilot specification
Blank : Internal pilot
G : External pilot
※: Except for the F18 series

Piping specification
VJ : Dual-use different size fitting valve base
VJ5 : Single size fitting valve base F10: ϕ4, F15: ϕ6
VJ6 : Single size fitting valve base F10: ϕ6, F15: ϕ8
VJ5A : 3-port valve specification normally closed, single size fitting valve base F10: ϕ4, F15: ϕ6Note
VJ5B : 3-port valve specification normally open, single size fitting valve base F10: ϕ4, F15: ϕ6Note
VJ6A : 3-port valve specification normally closed, single size fitting valve base F10: ϕ6, F15: ϕ8Note
VJ6B : 3-port valve specification normally open, single size fitting valve base F10: ϕ6, F15: ϕ8Note
VM : Female thread valve base
VMA : 3-port valve specification normally closed, female thread valve baseNote
VMB : 3-port valve specification normally open, female thread valve baseNote
VP : Valve base plate

Muffler

KM - J□

Fitting size
6 : Outer diameter ϕ6 (for individual exhaust spacer)
8 : Outer diameter ϕ8 (for individual exhaust spacer)
10 : Outer diameter ϕ10 (for F10, F15 and for individual exhaust spacer)
12 : Outer diameter ϕ12 (for F18)
(Sales unit: Set of 10 mufflers)

Cable for S-LINK

YS151-KB2

(Cable length 2000mm)

Piping block assembly※

F□Z□ - □

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
※: Except for the F18 series

Piping specification
PJ : Dual-use different size fitting piping block (for F10 and F15)
PJ5 : Single size fitting piping block ϕ8 (not available for F18)
PJ6 : Single size fitting piping block ϕ10 (not available for F18)
PM : Female thread piping block (for F10 and F15)

Pilot specification
Blank : Internal pilot
G : External pilot

End blocks※ (one set of left and right)

F□Z□ - E

Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width
※: Except for the F18 series

Pilot specification
Blank : Internal pilot
G : External pilot

Wiring block assembly※

F□Z□ - F201 - DC24

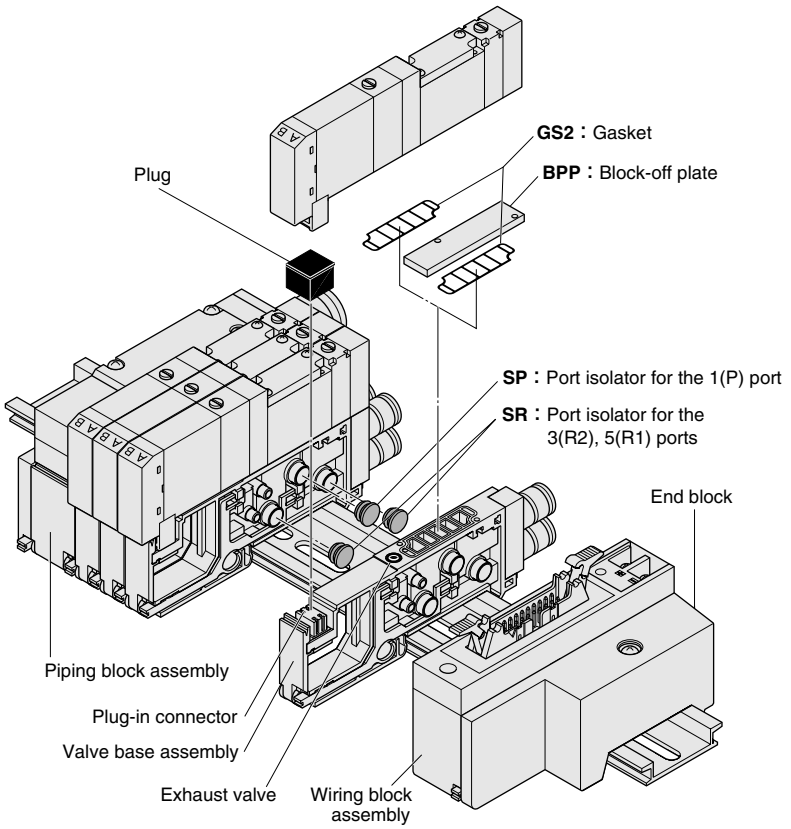
Valve size
10：10mm [0.394in.] width
15：15mm [0.591in.] width

Pilot specification
Blank : Internal pilot
G : External pilot

※: Except for the F18 series

■ **Table for maximum number of valve units by transmission block specification**

Transmission block specifications	Max. outputs	Maximum number of units: Wiring connection specification: Packed wiring (**Blank**)	Maximum number of units: Wiring connection specification: Double wiring (**-W**)
-01 : For UNI-WIRE System (16 outputs)	16	Varies depending on the number of mounted single solenoids, double solenoids, and block-off plates. The number of controlled solenoids should be designated as the maximum number of outputs or less.	8 units
-02 : For UNI-WIRE System (8 outputs)	8		4 units
-11 : For Mitsubishi Electric MELSECNET/MINI-S3	16		8 units
-21 : For OMRON SYSBUS Wire System	16		8 units
-31 : For OMRON B7A Link Terminal (Standard)	16		8 units
-32 : For OMRON B7A Link Terminal (High Speed)	16		8 units
-41 : For KOYO ELECTRONICS INDUSTRIES SA Bus (16 outputs)	16		8 units
-42 : For KOYO ELECTRONICS INDUSTRIES SA Bus (8 outputs)	8		4 units
-51 : For SUNX S-LINK (16 outputs)	16		8 units
-52 : For SUNX S-LINK (8 outputs)	8		4 units
-61 : For Mitsubishi Electric MELSEC I/O LINK	16		8 units
-71 : For Fuji Electric FA Components & Systems T Link Mini	16		8 units
-81 : For KEYENCE KZ-R	16		8 units
-A1 : For OMRON CompoBus/S (16 outputs)	16		8 units
-A2 : For OMRON CompoBus/S (8 outputs)	8		4 units
-B1 : For Mitsubishi Electric CC-Link	16		8 units



※Illustration shows the F10 series.

Manifold Order Code Example
（8 units of F10 Series）

F10M8SL-J5R-21-W

stn.1～5 F10T0-A1-J5 DC24V
stn.6～7 F10T2-A1-J6 DC24V
stn.8 F10BPP-J6

Note: This order code example has no relationship to the above illustration.

Precautions for Order Codes

● **Orders for valves only**

Enter the code | Valve size | Valve specification | Operation type | Manual override | Valve outlet type | Voltage | to order.

● **Wiring connection specification**

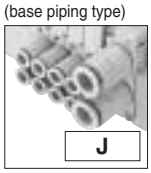
Blank (packed wiring) : Wiring is made in accordance with the mounted valve specifications.
-W (double wiring) : Wiring is always for the double solenoid, regardless of the mounted valve specifications.

Caution: Caution should be exercised that the block-off plate wiring connections are always double wiring (allocated 2 control points to 1 unit), regardless of the wiring connection specification.

Serial Transmission Compatible Manifold for OMRON CompoBus/D Order Codes

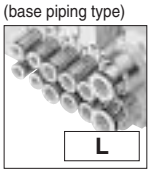
■Manifold outlet specification

With dual-use different size fitting blocks (base piping type)



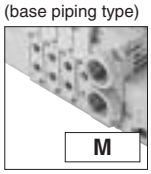
Outlet port fitting
F10 : ϕ4, ϕ6
F15 : ϕ6, ϕ8
F18 : ϕ8, ϕ10

With selectable fittings (base piping type)



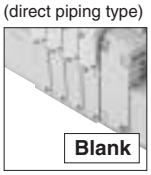
Outlet port should be selected in accordance with the manifold fitting specification

With female thread blocks (base piping type)



Outlet port female thread
F10 : M5×0.8
F15 : Rc1/8
F18 : Rc1/4

With plates (direct piping type)



■Pilot specification

Blank
Internal pilot manifold

G
External pilot manifold

■Piping block specification (supply and exhaust)

Different size fitting block
-JR : Dual-use different size fitting, right-side mounting
-JL : Dual-use different size fitting, left-side mounting
-JD : Dual-use different size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10, F15: ϕ8, ϕ10 **F18:** ϕ12 only

Female thread block
-MR : Female thread, right-side mounting
-ML : Female thread, left-side mounting
-MD Female thread, both-side mounting
Female thread size (1(P), 3, 5(R) ports)
F10, F15: Rc1/4 **F18:** Rc3/8

Single size fitting block
(Not available for F18)
-J5R : Single size fitting, right-side mounting
-J5L : Single size fitting, left-side mounting
-J5D : Single size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10 and **F15:** ϕ8
-J6R : Single size fitting, right-side mounting
-J6L : Single size fitting, left-side mounting
-J6D : Single size fitting, both-side mounting
Fitting size (1(P), 3, 5(R) ports)
F10 and **F15:** ϕ10

■Transmission block specification

-91: For OMRON CompoBus/D Note
Note: The transmission block is for left-side mounting only.

F10, F15 series

●Mounted on the DIN rail at shipping.

F18 series

■Wiring connection specification

Blank
Packed wiring: Wiring is made in accordance with the mounted valve specifications.

-W
Double wiring: Wiring is always for the double solenoid, regardless of the specifications of the mounted valve.

■Valve size

F10M
10mm [0.394in.] width
Effective area 5mm² 〔Cv: 0.28〕

F15M
15mm [0.591in.] width
Effective area 10mm² 〔Cv: 0.56〕

F18M
18mm [0.709in.] width
Effective area 18mm² 〔Cv: 1.0〕

	Valve size	Valve units	Manifold outlet specification	Pilot specification	Piping block specification	Transmission block specification	Wiring connection specification
	Manifold model						
Base piping type	F10M F15M F18M	2 ⋮ □ Note1	J M	Blank G	-JR -J5R Note2 -JL -J6R Note2 -JD -J5L Note2 -MR -J6L Note2 -ML -J5D Note2 -MD -J6D Note2	-91	Blank -W
Base piping type selectable fitting	F10M F15M F18M	2 ⋮ □ Note1	L	Blank G	-JR -J5R Note2 -JL -J6R Note2 -JD -J5L Note2 -MR -J6L Note2 -ML -J5D Note2 -MD -J6D Note2	-91	Blank -W
Direct piping type	F10M F15M F18M	2 ⋮ □ Note1	Blank	Blank G	-JR -J5R Note2 -JL -J6R Note2 -JD -J5L Note2 -MR -J6L Note2 -ML -J5D Note2 -MD -J6D Note2	-91	Blank -W

Notes: 1. To determine the maximum number of units, see the table for maximum number of valve units on p.551.
2. Not available for F18

■Valve specification

T0 : 2-position, for single solenoid only
T1 : 2-position, single solenoid specification
T2 : 2-position, double solenoid specification
T3 : 3-position, closed center
T4 : 3-position, exhaust center
T5 : 3-position, pressure center

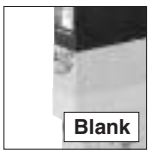
■Operation type

Blank
Internal pilot type Note7

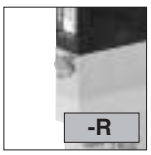
G
External pilot type Note8
(for positive pressure)
※ No vacuum valve can be mounted.

■Manual override

Manual override button



Manual override lever (made to order) Note5



■Valve outlet type

-A1 With plate Note4 (base piping type)

5-port specification

-FJ	With dual-use different size fitting block (direct piping type)	**F10 :** φ4, φ6 **F15 :** φ6, φ8 **F18 :** φ8, φ10
-FJ5	With single size fitting block (direct piping type)	**F10 :** φ4 **F15 :** φ6 **F18 :** φ8
-FJ6	With single size fitting block (direct piping type)	**F10 :** φ6 **F15 :** φ8 **F18 :** φ10
-FM	With female thread block (direct piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8 **F18 :** Rc1/4

3-port specification

-FJ5A	With single size fitting block, normally closed (NC) (direct piping type)	**F10 :** φ4 **F15 :** φ6
-FJ5B	With single size fitting block, normally open (NO) (direct piping type)	**F10 :** φ4 **F15 :** φ6
-FJ6A	With single size fitting block, normally closed (NC) (direct piping type)	**F10 :** φ6 **F15 :** φ8
-FJ6B	With single size fitting block, normally open (NO) (direct piping type)	**F10 :** φ6 **F15 :** φ8
-FMA	With female thread block, normally closed (NC) (direct piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8
-FMB	With female thread block, normally open (NO) (direct piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8

Caution: The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

■Manifold fitting specification

5-port specification

-J5	With single size fitting block (base piping type)	**F10 :** φ4 **F15 :** φ6 **F18 :** φ8
-J6	With single size fitting block (base piping type)	**F10 :** φ6 **F15 :** φ8 **F18 :** φ10
-M	With female thread block (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8 **F18 :** Rc1/4

3-port specification

-J5A	With single size fitting block, normally closed (NC) (base piping type)	**F10 :** φ4 **F15 :** φ6
-J5B	With single size fitting block, normally open (NO) (base piping type)	**F10 :** φ4 **F15 :** φ6
-J6A	With single size fitting block, normally closed (NC) (base piping type)	**F10 :** φ6 **F15 :** φ8
-J6B	With single size fitting block, normally open (NO) (base piping type)	**F10 :** φ6 **F15 :** φ8
-MA	With female thread block, normally closed (NC) (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8
-MB	With female thread block, normally open (NO) (base piping type)	**F10 :** M5×0.8 **F15 :** Rc1/8

Caution: The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.

■Port isolator

Blank : Without port isolator
-SP : For 1(P) port Note7
-SR : For 3(R2), 5(R1) ports Note7
-SA : For both 1(P), 3(R2), 5(R1) ports Note7

■Individual air supply and exhaust spacer

Blank : Without spacer
-PPM : Individual air supply spacer (with M5 female thread for F10)
-PP6 : Individual air supply spacer (with φ6 fitting for F15)
-PP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
-PP0 : Individual air supply spacer (with φ10 fitting for F18)
-PRM : Individual exhaust spacer (with M5 female thread for F10)
-PR6 : Individual exhaust spacer (with φ6 fitting for F15)
-PR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
-PR0 : Individual exhaust spacer (with φ10 fitting for F18)
For details, see p.509.

Note: Valves of different sizes cannot be mounted together on manifolds.

Station	Valve size	Valve specification	Operation type	Manual override	Valve outlet type	Manifold fitting specification	Individual air supply and exhaust spacer	Port isolator	Voltage
Mounting valve models									
stn. 1 ⋮ stn.□ Note3	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank Note8 G Note9	Blank -R Note6	-A1 Note4		Blank -PRM -PPM -PR6 -PP6 -PR8 -PP8 -PR0 -PP0	Blank -SP Note7 -SR Note7 -SA Note7	DC24V
		BPP (for block-off plate) Note5							
stn. 1 ⋮ stn.□ Note3	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank Note8 G Note9	Blank -R Note6	-A1 Note4	-J5 -J6A -J6 -J6B -M -MA -J5A -MB -J5B	Blank -PRM -PPM -PR6 -PP6 -PR8 -PP8 -PR0 -PP0	Blank -SP Note7 -SR Note7 -SA Note7	DC24V
		BPP (for block-off plate) Note5							
stn. 1 ⋮ stn.□ Note3	F10 F15 F18	T0 T3 T1 T4 T2 T5	Blank Note8 G Note9	Blank -R Note6	-FJ -FJ5B -FJ5 -FJ6A -FJ6 -FJ6B -FM -FMA -FJ5A -FMB		Blank -PRM -PPM -PR6 -PP6 -PR8 -PP8 -PR0 -PP0	Blank -SP Note7 -SR Note7 -SA Note7	DC24V
		BPP (for block-off plate) Note5							

Notes: 3. Valve mounting location is from the left, with the solenoid on top, and the 4(A), 2(B) ports side in front.
4. When selecting **J**, **M**, or **L** (base piping type) for the manifold outlet specifications, always enter **-A1** (with plate) for the valve outlet type.
5. Caution should be exercised that the block-off plate wiring is always double wiring (allocated 2 control pins at 1 stn.), regardless of the wiring connection specification.
6. The manual override lever is made to order. Consult us for delivery. When the valve specifications are **T1** or **T2**, the manual override lever is placed on the A side only.
7. Port isolators can be installed only when piping blocks are mounted on both sides. In addition, only 1 port isolator can be mounted in 1 manifold for **-SA**, or 1 each port isolator for **-SP** and **-SR** for a total of 2 locations. When shipping, the designated port isolators are mounted between the designated station and the station to its immediate left (the next smaller stn. No.).
8. Cannot be mounted on the external pilot manifold.
9. Cannot be mounted on the internal pilot manifold.

Additional Parts Order Codes for Serial Transmission Compatible Manifold

Parts for manifold

F□Z - □

Valve size
10 : 10mm [0.394in.] width
15 : 15mm [0.591in.] width
18 : 18mm [0.709in.] width

Parts content
GS2 : Gasket (gasket and exhaust valve)
SP : Port isolator (for 1(P) port)
SR : Port isolator (for 3(R2), 5(R1) ports)
SA : Port isolator (for 1(P), 3(R2), 5(R1) ports)

Individual air supply and exhaust spacer

(Spacer for plug-in type, gasket, exhaust valve, and 2 mounting screws)

F□Z - □

Valve size
10 : 10mm [0.394in.] width
15 : 15mm [0.591in.] width
18 : 18mm [0.709in.] width

Specification
PPM : Individual air supply spacer (with M5 female thread for F10)
PP6 : Individual air supply spacer (with ϕ6 fitting for F15)
PP8 : Individual air supply spacer (with ϕ8 fitting for F15 and F18)
PP0 : Individual air supply spacer (with ϕ10 fitting for F18)
PRM : Individual exhaust spacer (with M5 female thread for F10)
PR6 : Individual exhaust spacer (with ϕ6 fitting for F15)
PR8 : Individual exhaust spacer (with ϕ8 fitting for F15 and F18)
PR0 : Individual exhaust spacer (with ϕ10 fitting for F18)

※For details, see p.509

Block-off plate (block-off plate, 2 mounting screws, and plug)

F□BPP

Valve size
10 : 10mm [0.394in.] width
15 : 15mm [0.591in.] width
18 : 18mm [0.709in.] width

Serial transmission block (single unit)

YS391

Transmission block specification
91 : For OMRON CompoBus/D

Muffler

KM - J□

Fitting size
6 : Outer diameter ϕ6 (for individual exhaust spacer)
8 : Outer diameter ϕ8 (for individual exhaust spacer)
10 : Outer diameter ϕ10 (for F10, F15 and for individual exhaust spacer)
12 : Outer diameter ϕ12 (for F18)
(Sales unit: Set of 10 mufflers)

Valve base assembly (valve base, gasket, lead wire, and plug-in connector)

F□Z□ - □ - F

Valve size
10 : 10mm [0.394in.] width
15 : 15mm [0.591in.] width
18 : 18mm [0.709in.] width

Pilot specification
Blank : Internal pilot
G : External pilot

Piping specification
VJ : Dual-use different size fitting valve base
VJ5 : Single size fitting valve base F10: ϕ4, F15: ϕ6, F18: ϕ8
VJ6 : Single size fitting valve base F10: ϕ6, F15: ϕ8, F18: ϕ10
VJ5A : 3-port valve specification normally closed, single size fitting valve base F10: ϕ4, F15: ϕ6[Note]
VJ5B : 3-port valve specification normally open, single size fitting valve base F10: ϕ4, F15: ϕ6[Note]
VJ6A : 3-port valve specification normally closed, single size fitting valve base F10: ϕ6, F15: ϕ8[Note]
VJ6B : 3-port valve specification normally open, single size fitting valve base F10: ϕ6, F15: ϕ8[Note]
VM : Female thread valve base
VMA : 3-port valve specification normally closed, female thread valve base[Note]
VMB : 3-port valve specification normally open, female thread valve base[Note]
VP : Valve base plate
Note: Not available for F18

Piping block assembly

F□Z□ - □

Valve size
10 : 10mm [0.394in.] width
15 : 15mm [0.591in.] width
18 : 18mm [0.709in.] width

Piping specification
PJ : Dual-use different size fitting piping block (for F10, F15)
PJ5 : Single size fitting piping block ϕ8 (Not available for F18)
PJ6 : Single size fitting piping block ϕ10 (Not available for F18)
PM : Female thread piping block (for F10, F15)

Pilot specification
Blank: Internal pilot
G : External pilot

End blocks (one set of left and right)

F□Z□ - E

Valve size
10 : 10mm [0.394in.] width
15 : 15mm [0.591in.] width
18 : 18mm [0.709in.] width

Pilot specification
Blank: Internal pilot
G : External pilot

Wiring block assembly

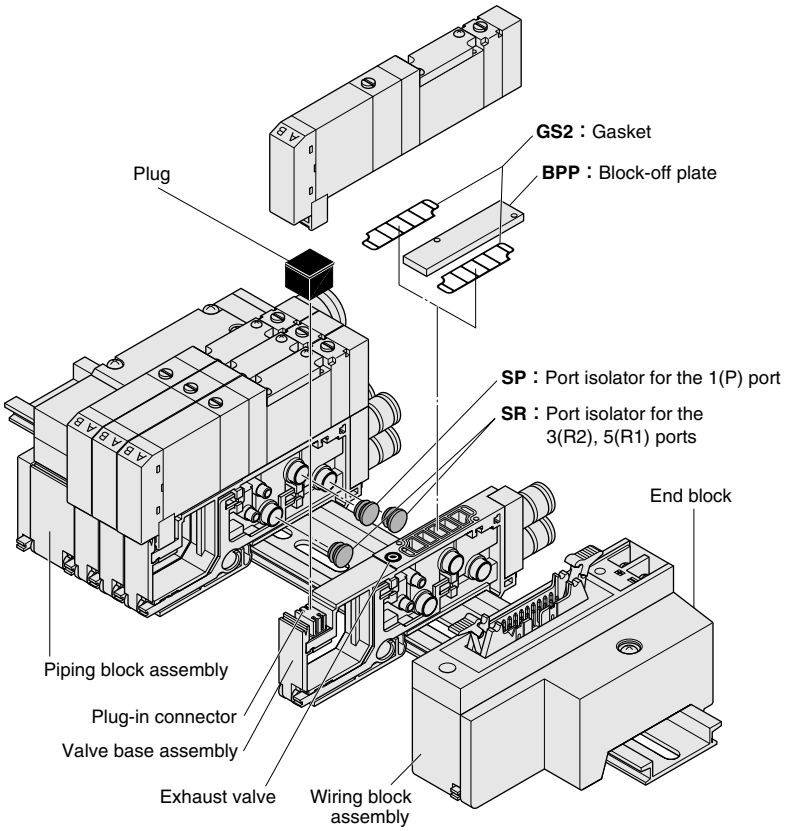
F□Z□ - F201 - DC24

Valve size
10 : 10mm [0.394in.] width
15 : 15mm [0.591in.] width
18 : 18mm [0.709in.] width

Pilot specification
Blank: Internal pilot
G : External pilot

■Table for maximum number of valve units

		Maximum number of units	
		Wiring connection specification	
Wiring specification	Max. outputs	Packed wiring (**Blank**)	Double wiring (**-W**)
-91: For OMRON CompoBus/D	16	Varies depending on the number of mounted single solenoids, double solenoids, and block-off plates. The number of controlled solenoids should be designated as the maximum number of outputs or less.	8 units



※Illustration shows the F10 series.

Manifold Order Code Example

（8 units of F10 Series）

F10M8SL-J5R-91-W

stn.1～5 F10T0-A1-J5 DC24V
stn.6～7 F10T2-A1-J6 DC24V
stn.8 F10BPP-J6

Note: This order code example has no relationship to the above illustration.

Precautions for Order Codes

● **Orders for valves only**

Enter the code | Valve size | Valve specification | Operation type | Manual override | Valve outlet type | Voltage | to order.

● **Wiring connection specification**

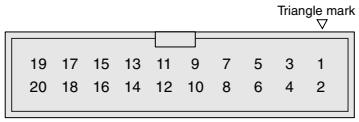
Blank (packed wiring) : Wiring is made in accordance with the mounted valve specifications.
-W (double wiring) : Wiring is always for the double solenoid, regardless of the mounted valve specifications.

Caution: Caution should be exercised that the block-off plate wiring connections are always double wiring (allocated 2 control points to 1 unit) regardless of the wiring connection specification.

PC Board Manifold Pin Locations by Wiring Specification (Top View)

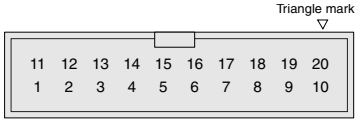
Flat cable connector (20-pin)

●**-F200** (Maximum number of control pins: 16)



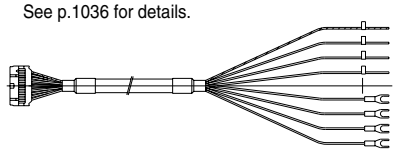
1～16 : Control pins
17, 18 : (−) pins (Short-circuited inside)
19, 20 : (+) pins (Short-circuited inside)

●**-F201** (Maximum number of control pins: 16)



1～8 : Control pins
11～18 : Control pins
9, 19 : (−) pins (Short-circuited inside)
10, 20 : (+) pins (Short-circuited inside)
Caution : Connector pin numbers are assigned for the sake of convenience. Use the ▽ mark as the reference.
Remark : The **-F201** corresponds to Koganei's pin locations for the PC wiring system (wire-saving unit). For details, see the PC wiring system on p.984.

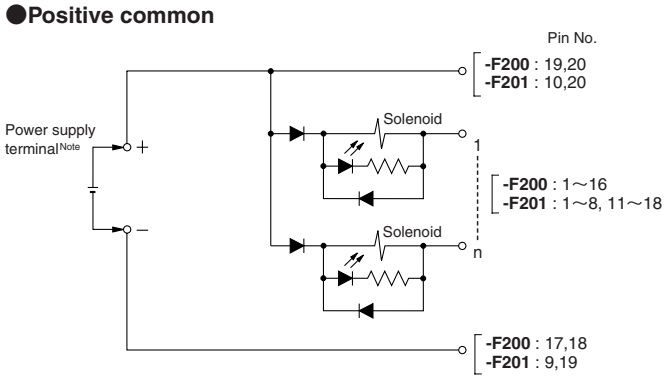
● Various dedicated cable assemblies are available. See p.1036 for details.



Remark: Socket and strain relief for flat cable included at shipping.
※ For the relationship between the pin No. (terminal No.) and the corresponding solenoid, see p.554.

Detailed Diagram of Wiring System

●**Positive common**



Note: For connecting a power line to the PC board manifold power terminal, see the "PC Board Manifold" precautions on p.506.

Pin No. and Corresponding Solenoid (For PC Board Manifold A Type and F Type)

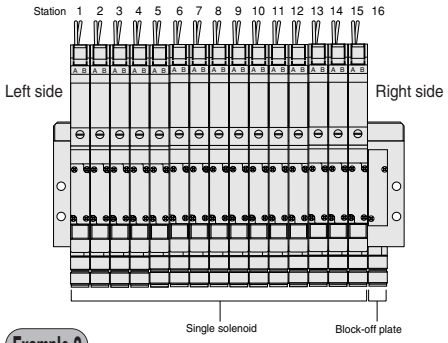
The examples below show the relationship between the PC board manifold pin No. and the corresponding solenoid.
The mounting example shows the maximum number of control pins in use.

Flat cable connector (20-pin)

●Wiring specification **-F200** (Maximum number of control pins: 16)

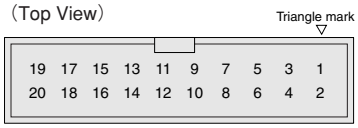
Example 1

F10M16APJ-F200-S stn.1～15 F10T1-A1-PP DC24V
stn.16 F10BPC



Number of units : 16 units
Wiring specification : **-F200**
Wiring connection specification : **-S** (single wiring)

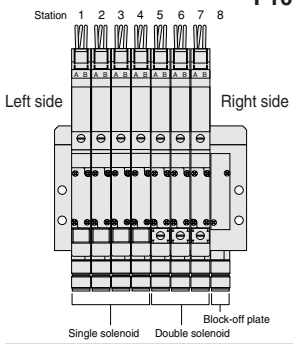
(Top View)



Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	+	−	15A	13A	11A	9A	7A	5A	3A	1A
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	+	−	16A	14A	12A	10A	8A	6A	4A	2A

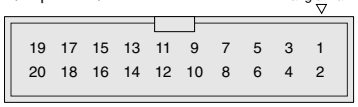
Example 2

F10M8APJ-F200-W stn.1～4 F10T1-A1-PP DC24V
stn.5～7 F10T2-A1-PP DC24V
stn.8 F10BPC



Number of units : 8 units
Wiring specification : **-F200**
Wiring connection specification : **-W** (double wiring)

(Top View)



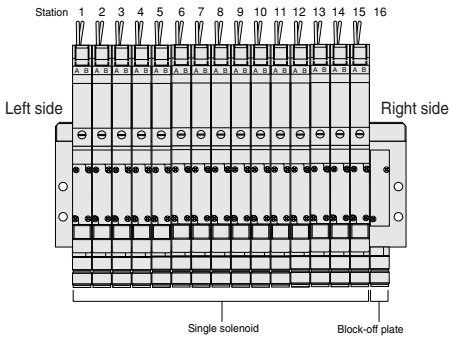
Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	+	−	8A	7A	6A	5A	4A	3A	2A	1A
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	+	−	8B	7B	6B	5B	4B	3B	2B	1B

Flat cable connector (20-pin)

●Wiring specification **-F201** (Maximum number of control pins: 16)

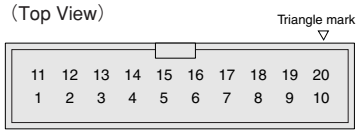
Example 1

F10M16APJ-F201-S stn.1～15 F10T1-A1-PP DC24V
stn.16 F10BPC



Number of units : 16 units
Wiring specification : **-F201**
Wiring connection specification : **-S** (single wiring)

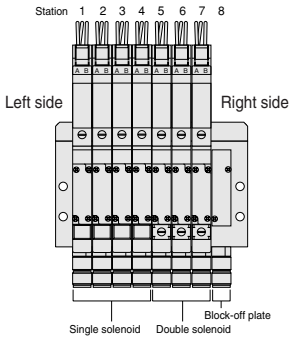
(Top View)



Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	9A	10A	11A	12A	13A	14A	15A	16A	−	+
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1A	2A	3A	4A	5A	6A	7A	8A	−	+

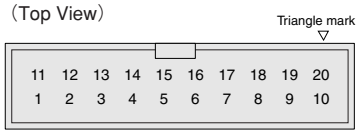
Example 2

F10M8APJ-F201-W stn.1～4 F10T1-A1-PP DC24V
stn.5～7 F10T2-A1-PP DC24V
stn.8 F10BPC



Number of units : 8 units
Wiring specification : **-F201**
Wiring connection specification : **-W** (double wiring)

(Top View)



Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	5A	5B	6A	6B	7A	7B	8A	8B	−	+
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1A	1B	2A	2B	3A	3B	4A	4B	−	+

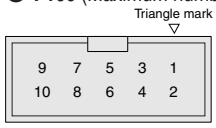
Caution: Connector pin numbers are assigned for the sake of convenience.
Use the ▽ mark as the reference.

Notes: 1. The valve No.1A, 1B, 2A, 2B··· numerals show the stn. numbers in order, while the letters A and B show the A and B sides of the solenoid.
2. The stn. numbers are counted from the left, 1, 2···, with the solenoid on top and the valve in front.

Split Manifold Plug-In Type Pin (Terminal) Locations by Wiring Specification (Top View)

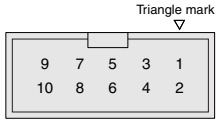
Flat cable connector (10-pin)

●**-F100** (Maximum number of control pins: 8)



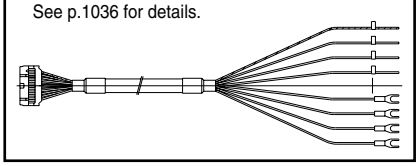
1～8 : Control pins
9, 10 : Common pins (Short-circuited within the wiring block)

●**-F101** (Maximum number of control pins: 8)



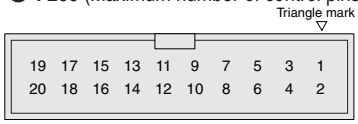
1～8 : Control pins
9 : (－) pin
10 : (＋) pin

● Various dedicated cable assemblies are available. See p.1036 for details.



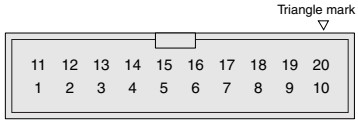
Flat cable connector (20-pin)

●**-F200** (Maximum number of control pins: 16)



1～16 : Control pins
17, 18 : (－) pins (Short-circuited within the wiring block)
19, 20 : (＋) pins (Short-circuited within the wiring block)

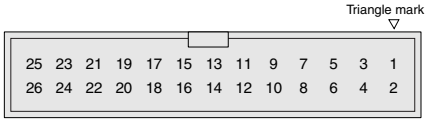
●**-F201** (Maximum number of control pins: 16)



1～8 : Control pins
11～18 : Control pins
9, 19 : (－) pins (Short-circuited within the wiring block)
10, 20 : (＋) pins (Short-circuited within the wiring block)
Caution : Connector pin numbers are assigned for the sake of convenience.
Use the ▽ mark as the reference.
Remark : The **-F201** corresponds to Koganei's pin locations for the PC wiring system (wire-saving unit). For details, see the PC wiring system on p.984.

Flat cable connector (26-pin)

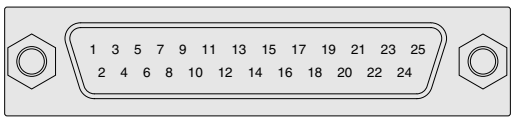
●**-F260** (Maximum number of control pins: 20)



1～20 : Control pins
23, 24 : (－) pins (Short-circuited within the wiring block)
25, 26 : (＋) pins (Short-circuited within the wiring block)

D-sub connector (25-pin)

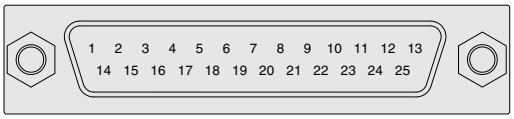
●**-D250** (Maximum number of control pins: 16)



1～16 : Control pins
20, 21, 22 : (－) pins (Short-circuited within the wiring block)
23, 24, 25 : (＋) pins (Short-circuited within the wiring block)

Caution: The above pin numbers are assigned based on the solenoid valve wiring sequence for the sake of convenience.
They differ from the pin locations and pin numbers (marked) prescribed (JIS-X5101) for the Data Circuit-terminating Equipment (DCE).

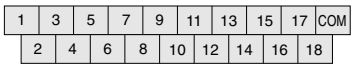
●**-D251** Pin locations based on JIS
(Maximum number of control pins: 20)



1～10, 14～23 : Control pins
12, 13 : (－) pins (Short-circuited within the wiring block)
24, 25 : (＋) pins (Short-circuited within the wiring block)

Terminal block type (19 terminals, M3 thread)

●**-T200** (Maximum number of control pins: 18)



1～18 : Control terminals
COM : Common terminal

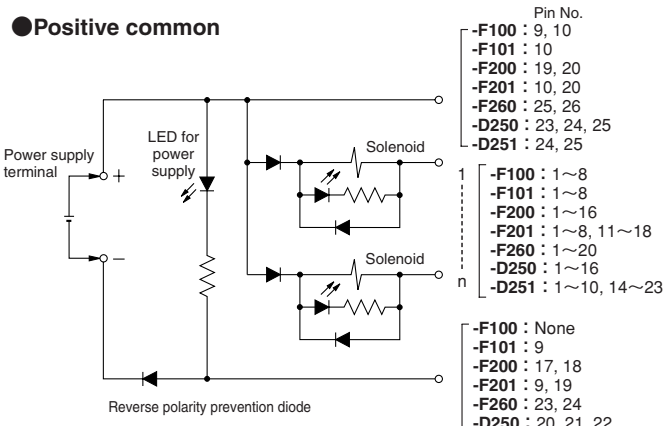
Caution: Apply the tightening torque for the terminal screw (M3) to 49.0N·cm{5.0kgf·cm} [4.3in·lbf] or less.

※ For the relationship between the pin No.(terminal No.) and the corresponding solenoid, see p.556～560.

Detailed Diagram of Wiring System

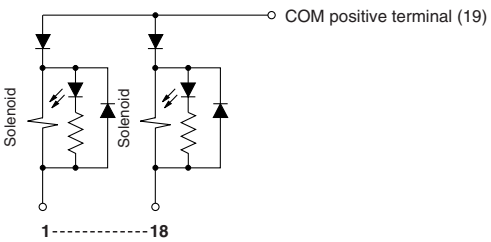
Flat cable connector and D-sub connector (DC12 and 24V)

●**Positive common**

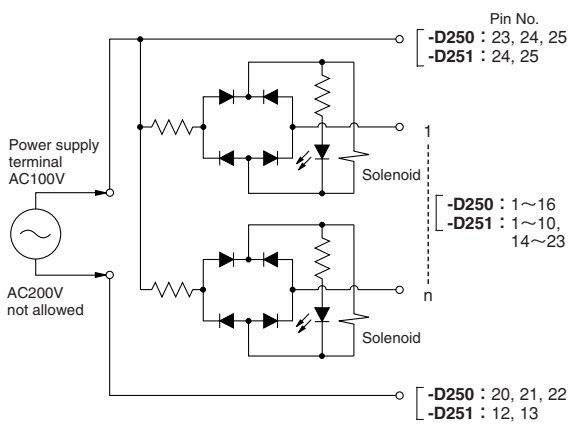


Terminal block (For DC12 and 24V specifications)

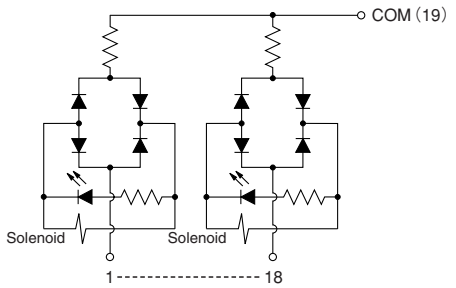
●**Positive common**



D-sub connector (For AC100V specification)



Terminal block (For AC100V specification)



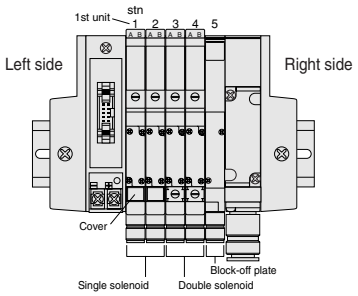
Pin No. (Terminal No.) and Corresponding Solenoid (For Split Manifold Plug-in Type)

The examples below show the relationship between the split manifold pin No. (terminal No.) and the corresponding solenoid.
The mounting example shows the maximum number of control pins in use.

Flat cable connector (10-pin)

●Wiring specification **-F100** (Maximum number of control pins: 8)

Example 1 **F10M5PJ-JR-F100 DC24V stn.1～2 F10T1-A1 DC24V**
stn.3～4 F10T2-A1 DC24V
stn.5 F10BPP



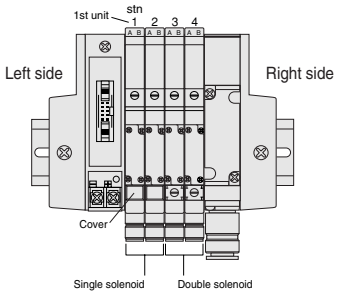
Number of units : 5 units
Wiring specification : **-F100**
Wiring connection specification : **Blank** (packed wiring)

(Top View) Triangle mark ▽

9	7	5	3	1
10	8	6	4	2

Pin No.	9	7	5	3	1
Valve No.	+	5A	4A	3A	1A
Pin No.	10	8	6	4	2
Valve No.	+	5B	4B	3B	2A

Example 2 **F10M4PJ-JR-F100-W DC24V stn.1～2 F10T1-A1 DC24V**
stn.3～4 F10T2-A1 DC24V



Number of units : 4 units
Wiring specification : **-F100**
Wiring connection specification : **-W** (double wiring)

(Top View) Triangle mark ▽

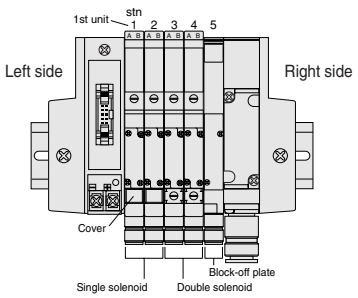
9	7	5	3	1
10	8	6	4	2

Pin No.	9	7	5	3	1
Valve No.	+	4A	3A	2A	1A
Pin No.	10	8	6	4	2
Valve No.	+	4B	3B	2B	1B

Flat cable connector (10-pin)

●Wiring specification **-F101** (Maximum number of control pins: 8)

Example 1 **F10M5PJ-JR-F101 DC24V stn.1～2 F10T1-A1 DC24V**
stn.3～4 F10T2-A1 DC24V
stn.5 F10BPP



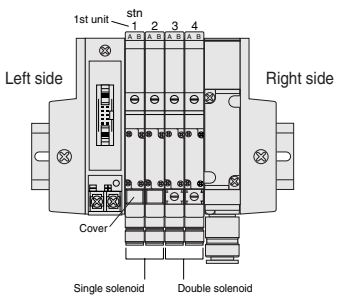
Number of units : 5 units
Wiring specification : **-F101**
Wiring connection specification : **Blank** (packed wiring)

(Top View) Triangle mark ▽

9	7	5	3	1
10	8	6	4	2

Pin No.	9	7	5	3	1
Valve No.	−	5A	4A	3A	1A
Pin No.	10	8	6	4	2
Valve No.	+	5B	4B	3B	2A

Example 2 **F10M4PJ-JR-F101-W DC24V stn.1～2 F10T1-A1 DC24V**
stn.3～4 F10T2-A1 DC24V



Number of units : 4 units
Wiring specification : **-F101**
Wiring connection specification : **-W** (double wiring)

(Top View) Triangle mark ▽

9	7	5	3	1
10	8	6	4	2

Pin No.	9	7	5	3	1
Valve No.	−	4A	3A	2A	1A
Pin No.	10	8	6	4	2
Valve No.	+	4B	3B	2B	1B

Notes: 1. The valve No.1A, 1B, 2A, 2B··· numerals show the stn. numbers in order, while the letters A and B show the A and B sides of the solenoid.
2. The stn. numbers are counted from the left, 1, 2···, with the solenoid on top and the valve in front.
3. When selecting wiring connection specification **-W**, all wiring becomes double wiring, regardless of valve specifications.
4. Caution should be exercised that the block-off plate is always double wiring (allocated 2 control pins to 1 unit), regardless of the wiring connection specifications.
5. Connector pin numbers are assigned for the sake of convenience. Use the ▽mark as the reference.

Pin No. (Terminal No.) and Corresponding Solenoid (For Split Manifold Plug-in Type)

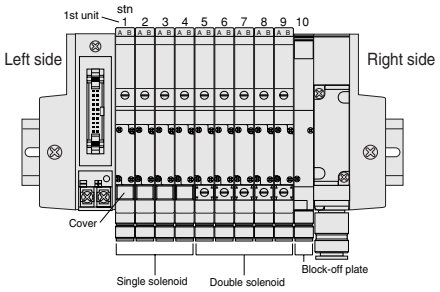
The examples below show the relationship between the split manifold pin No. (terminal No.) and the corresponding solenoid.
The mounting example shows the maximum number of control pins in use.

Flat cable connector (20-pin)

●Wiring specification **-F200** (Maximum number of control pins: 16)

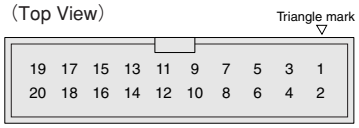
Example 1

F10M10PJ-JR-F200 DC24V stn.1～4 F10T1-A1 DC24V
stn.5～9 F10T2-A1 DC24V
stn.10 F10BPP



Number of units : 10 units
Wiring specification : **-F200**
Wiring connection specification : **Blank** (packed wiring)

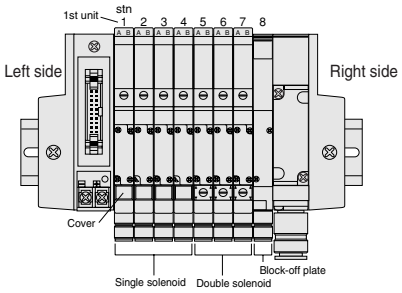
(Top View)



Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	+	−	10A	9A	8A	7A	6A	5A	3A	1A
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	+	−	10B	9B	8B	7B	6B	5B	4A	2A

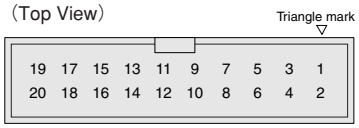
Example 2

F10M8PJ-JR-F200-W DC24V stn.1～4 F10T1-A1 DC24V
stn.5～7 F10T2-A1 DC24V
stn.8 F10BPP



Number of units : 8 units
Wiring specification : **-F200**
Wiring connection specification : **-W** (double wiring)

(Top View)



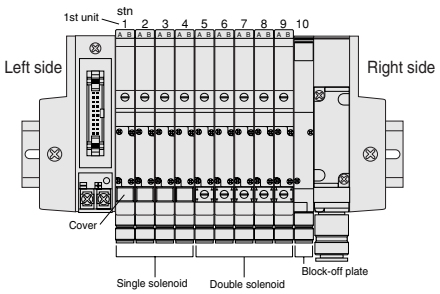
Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	+	−	8A	7A	6A	5A	4A	3A	2A	1A
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	+	−	8B	7B	6B	5B	4B	3B	2B	1B

Flat cable connector（20-pin）

●Wiring specification **-F201** (Maximum number of control pins: 16)

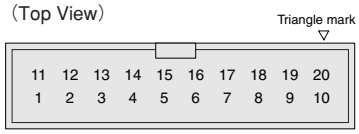
Example 1

F10M10PJ-JR-F201 DC24V stn.1～4 F10T1-A1 DC24V
stn.5～9 F10T2-A1 DC24V
stn.10 F10BPP



Number of units : 10 units
Wiring specification : **-F201**
Wiring connection specification : **Blank** (packed wiring)

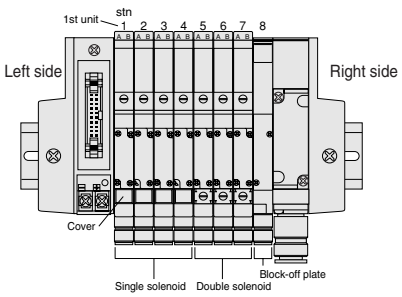
(Top View)



Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	7A	7B	8A	8B	9A	9B	10A	10B	−	+
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1A	2A	3A	4A	5A	5B	6A	6B	−	+

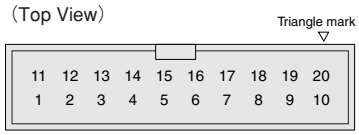
Example 2

F10M8PJ-JR-F201-W DC24V stn.1～4 F10T1-A1 DC24V
stn.5～7 F10T2-A1 DC24V
stn.8 F10BPP



Number of units : 8 units
Wiring specification : **-F201**
Wiring connection specification : **-W** (double wiring)

(Top View)



Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	5A	5B	6A	6B	7A	7B	8A	8B	−	+
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1A	1B	2A	2B	3A	3B	4A	4B	−	+

Caution: Connector pin numbers are assigned for the sake of convenience.
Use the ▽ mark as the reference.

Notes: 1. The valve No.1A, 1B, 2A, 2B··· numerals show the stn. numbers in order, while the letters A and B show the A and B sides of the solenoid.
2. The stn. numbers are counted from the left, 1, 2···, with the solenoid on top and the valve in front.
3. When selecting wiring connection specification **-W**, all wiring becomes double wiring, regardless of valve specifications.
4. Caution should be exercised that the block-off plate is always double wiring (allocated 2 control pins to 1 unit), regardless of the wiring connection specifications.
5. Connector pin numbers are assigned for the sake of convenience. Use the ▽ mark as the reference.

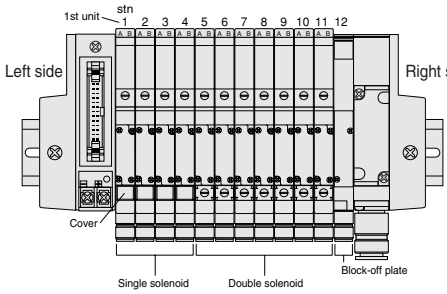
Pin No. (Terminal No.) and Corresponding Solenoid (For Split Manifold Plug-in Type)

The examples below show the relationship between the split manifold pin No. (terminal No.) and the corresponding solenoid.
The mounting example shows the maximum number of control pins in use.

Flat cable connector (26-pin)

●Wiring specification **-F260** (Maximum number of control pins: 20)

Example 1 **F10M12PJ-JR-F260 DC24V stn.1～4 F10T1-A1 DC24V**
stn.5～11 F10T2-A1 DC24V
stn.12 F10BPP



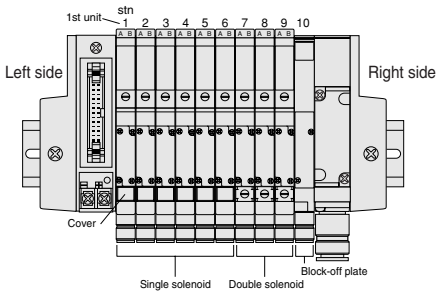
Number of units : 12 units
Wiring specification : **-F260**
Wiring connection specification : **Blank** (packed wiring)

(Top View) Triangle mark ▽

25	23	21	19	17	15	13	11	9	7	5	3	1
26	24	22	20	18	16	14	12	10	8	6	4	2

Pin No.	25	23	21	19	17	15	13	11	9	7	5	3	1
Valve No.	+	−		12A	11A	10A	9A	8A	7A	6A	5A	3A	1A
Pin No.	26	24	22	20	18	16	14	12	10	8	6	4	2
Valve No.	+	−		12B	11B	10B	9B	8B	7B	6B	5B	4A	2A

Example 2 **F10M10PJ-JR-F260-W DC24V stn.1～6 F10T1-A1 DC24V**
stn.7～9 F10T2-A1 DC24V
stn.10 F10BPP



Number of units : 10 units
Wiring specification : **-F260**
Wiring connection specification : **-W** (double wiring)

(Top View) Triangle mark ▽

25	23	21	19	17	15	13	11	9	7	5	3	1
26	24	22	20	18	16	14	12	10	8	6	4	2

Pin No.	25	23	21	19	17	15	13	11	9	7	5	3	1
Valve No.	+	−		10A	9A	8A	7A	6A	5A	4A	3A	2A	1A
Pin No.	26	24	22	20	18	16	14	12	10	8	6	4	2
Valve No.	+	−		10B	9B	8B	7B	6B	5B	4B	3B	2B	1B

Notes: 1. The valve No.1A, 1B, 2A, 2B··· numerals show the stn. numbers in order, while the letters A and B show the A and B sides of the solenoid.
2. The stn. numbers are counted from the left, 1, 2···, with the solenoid on top and the valve in front.
3. When selecting wiring connection specification **-W**, all wiring becomes double wiring, regardless of valve specifications.
4. Caution should be exercised that the block-off plate is always double wiring (allocated 2 control pins to 1 unit), regardless of the wiring connection specifications.
5. Connector pin numbers are assigned for the sake of convenience. Use the ▽ mark as the reference.

Pin No. (Terminal No.) and Corresponding Solenoid (For Split Manifold Plug-in Type)

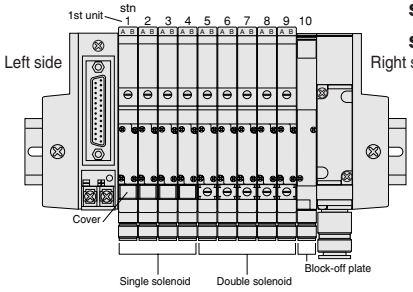
The examples below show the relationship between the split manifold pin No. (terminal No.) and the corresponding solenoid.
The mounting example shows the maximum number of control pins in use.

D-sub connector (25-pin)

●Wiring specification **-D250** (Maximum number of control pins: 16)

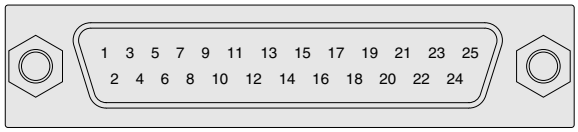
Caution: The connector pin numbers are assigned based on the solenoid valve wiring sequence for the sake of convenience. They differ from the pin locations and pin numbers (marked) prescribed (JIS-X5101) for the Data Circuit-terminating Equipment (DCE).

Example 1 **F10M10PJ-JR-D250 DC24V stn.1～4 F10T1-A1 DC24V**
stn.5～9 F10T2-A1 DC24V
stn.10 F10BPP



Number of units : 10 units
Wiring specification : **-D250**
Wiring connection specification : **Blank** (packed wiring)

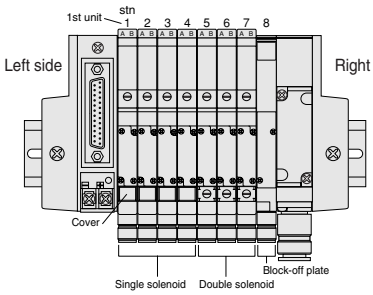
(Top View)



Pin No.	1	3	5	7	9	11	13	15	17	19	21	23	25
Valve No.	1A	3A	5A	6A	7A	8A	9A	10A			−	+	+

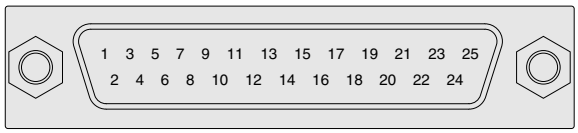
Pin No.	2	4	6	8	10	12	14	16	18	20	22	24
Valve No.	2A	4A	5B	6B	7B	8B	9B	10B		−	−	+

Example 2 **F10M8PJ-JR-D250-W DC24V stn.1～4 F10T1-A1 DC24V**
stn.5～7 F10T2-A1 DC24V
stn.8 F10BPP



Number of units : 8 units
Wiring specification : **-D250**
Wiring connection specification : **-W** (double wiring)

(Top View)



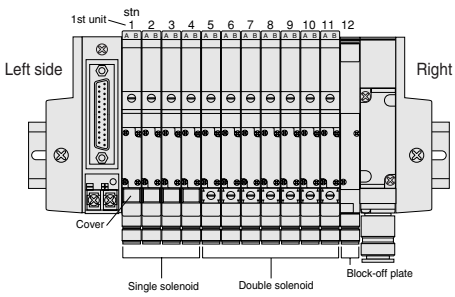
Pin No.	1	3	5	7	9	11	13	15	17	19	21	23	25
Valve No.	1A	2A	3A	4A	5A	6A	7A	8A			−	+	+

Pin No.	2	4	6	8	10	12	14	16	18	20	22	24
Valve No.	1B	2B	3B	4B	5B	6B	7B	8B		−	−	+

D-sub connector (25-pin)

●Wiring specification **-D251** Pin locations based on JIS (Maximum number of control pins: 20)

Example 1 **F10M12PJ-JR-D251 DC24V stn.1～4 F10T1-A1 DC24V**
stn.5～11 F10T2-A1 DC24V
stn.12 F10BPP



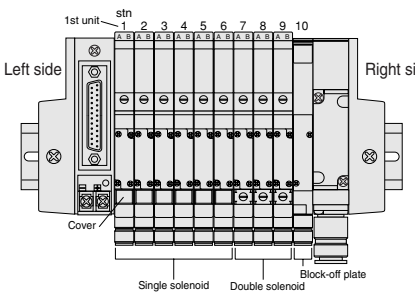
Number of units : 12 units
Wiring specification : **-D251**
Wiring connection specification : **Blank** (packed wiring)

(Top View)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Valve No.	1A	2A	3A	4A	5A	5B	6A	6B	7A	7B		−	−

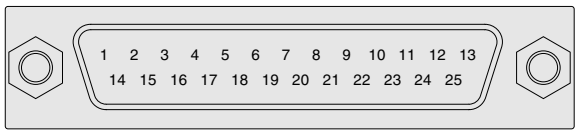
Pin No.	14	15	16	17	18	19	20	21	22	23	24	25
Valve No.	8A	8B	9A	9B	10A	10B	11A	11B	12A	12B	+	+

Example 2 **F10M10PJ-JR-D251-W DC24V stn.1～6 F10T1-A1 DC24V**
stn.7～9 F10T2-A1 DC24V
stn.10 F10BPP



Number of units : 10 units
Wiring specification : **-D251**
Wiring connection specification : **-W** (double wiring)

(Top View)



Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Valve No.	1A	1B	2A	2B	3A	3B	4A	4B	5A	5B		−	−

Pin No.	14	15	16	17	18	19	20	21	22	23	24	25
Valve No.	6A	6B	7A	7B	8A	8B	9A	9B	10A	10B	+	+

Notes: 1. The valve No.1A, 1B, 2A, 2B··· numerals show the stn. numbers in order, while the letters A and B show the A and B sides of the solenoid.
2. The stn. numbers are counted from the left, 1, 2···, with the solenoid on top and the valve in front.
3. When selecting wiring connection specification **-W**, all wiring becomes double wiring, regardless of valve specifications.
4. Caution should be exercised that the block-off plate is always double wiring (allocated 2 control pins to 1 unit), regardless of the wiring connection specifications.

Pin No. (Terminal No.) and Corresponding Solenoid (For Split Manifold Plug-in Type)

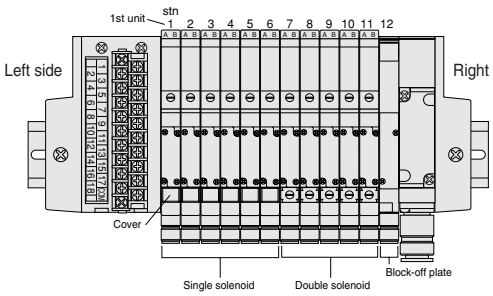
The examples below show the relationship between the split manifold terminal No. and the corresponding solenoid.
The mounting example shows the maximum number of control pins in use.

Terminal block type (19 terminals, M3 thread)

●Wiring specification **-T200** (Maximum number of control pins: 18)

Example 1

F10M12PJ-JR-T200 DC24V stn.1～6 F10T1-A1 DC24V
stn.7～11 F10T2-A1 DC24V
stn.12 F10BPP



Number of units : 12 units
Wiring specification : **-T200**
Wiring connection specification : **Blank** (packed wiring)

(Top View)

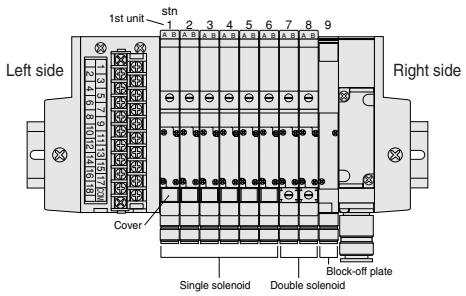
1	3	5	7	9	11	13	15	17	COM
2	4	6	8	10	12	14	16	18	

Terminal No.	1	3	5	7	9	11	13	15	17	COM
Valve No.	1A	3A	5A	7A	8A	9A	10A	11A	12A	＋

Terminal No.	2	4	6	8	10	12	14	16	18
Valve No.	2A	4A	6A	7B	8B	9B	10B	11B	12B

Example 2

F10M9PJ-JR-T200-W DC24V stn.1～6 F10T1-A1 DC24V
stn.7～8 F10T2-A1 DC24V
stn.9 F10BPP



Number of units : 9 units
Wiring specification : **-T200**
Wiring connection specification : **-W** (double wiring)

(Top View)

1	3	5	7	9	11	13	15	17	COM
2	4	6	8	10	12	14	16	18	

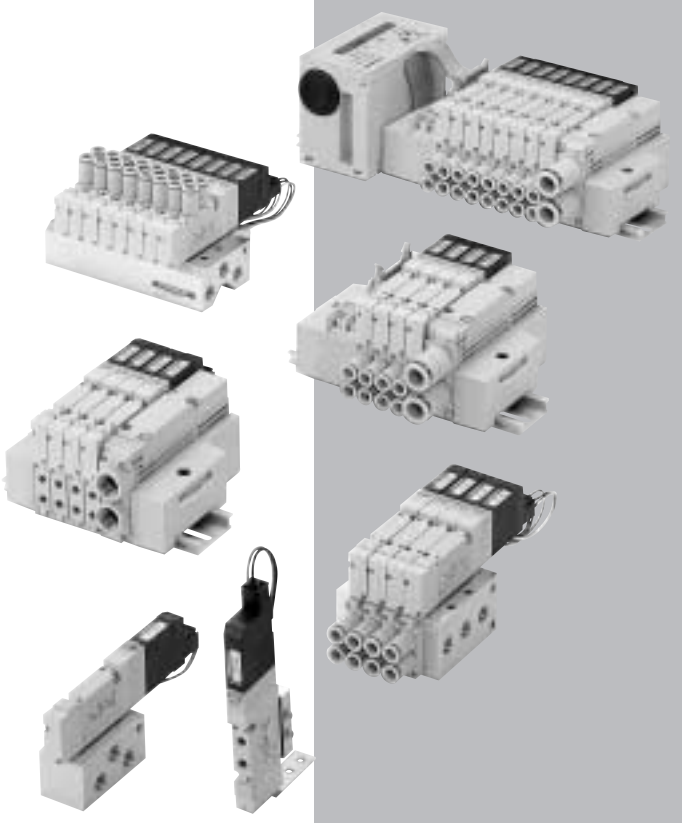
Terminal No.	1	3	5	7	9	11	13	15	17	COM
Valve No.	1A	2A	3A	4A	5A	6A	7A	8A	9A	＋

Terminal No.	2	4	6	8	10	12	14	16	18
Valve No.	1B	2B	3B	4B	5B	6B	7B	8B	9B

Notes: 1. The valve No.1A, 1B, 2A, 2B··· numerals show the stn. numbers in order, while the letters A and B show the A and B sides of the solenoid.
2. The stn. numbers are counted from the left, 1, 2···, with the solenoid on top and the valve in front.
3. When selecting wiring connection specification **-W**, all wiring becomes double wiring, regardless of valve specifications.
4. Caution should be exercised that the block-off plate is always double wiring (allocated 2 control terminals to 1 unit), regardless of the wiring connection specifications.

SOLENOID VALVES
F10 SERIES

INDEX



Specifications

Basic Models and Valve Functions

Item \ Basic model	F10T0	F10T1 F10T2	F10T3 F10T4 F10T5
Number of positions	2 positions		3 positions
Number of ports	5		
Valve function	Single solenoid only	Both single and double solenoid use	Closed center, Exhaust center, Pressure center

Remark: For the optional specifications and order codes, see p.525~552.

Specifications

Item \ Basic model		F10T0 F10T1 F10T2	F10T3 F10T4 F10T5	F10T0G F10T1G F10T2G	F10T3G F10T4G F10T5G	F10T0V F10T1V F10T2V	F10T3V
Media		Air					
Operation type		Internal pilot type		External pilot type (for positive pressure)		External pilot type (for vacuum)	
Effective area〔CV〕Note1 mm²		5〔0.28〕	4.5〔0.25〕	5〔0.28〕	4.5〔0.25〕	5〔0.28〕	4.5〔0.25〕
Port size Note2		M5× 0.8, fittings for φ4 and φ6, Rc1/8					
Lubrication		Not required					
Operating pressure range	Main valve	0.2～0.7MPa {2～7.1kgf/cm²} [29～102psi.]		0～0.7MPa {0～7.1kgf/cm²}Note3 [0～102psi.]		0.15MPa～−100kPa {1.5kgf/cm²～−750.1mmHg} [22psi.～−29.53in.Hg]	
	External pilot	——		0.2～0.7MPa {2～7.1kgf/cm²}Note3 [29～102psi.]		0.2～0.7MPa {2～7.1kgf/cm²} [29～102psi.]	
Proof pressure MPa {kgf/cm²} [psi.]		1.05 {10.7} [152]					
Response time Note4 ON/OFF time ms	DC12V, DC24V	15/20 or below	15/25 or below	15/20 or below	15/25 or below	15/20 or below	15/25 or below
	AC100V	15/20 or below	15/25 or below	15/20 or below	15/25 or below	15/20 or below	15/25 or below
Maximum operating frequency Hz		5					
Minimum time to energize for self holding Note5 ms		50	——	50	——	50	——
Operating temperature range (atmosphere and media) °C [°F]		5～50 [41～122]					
Shock resistance m/s² {G}		1373 {140.0} (Axial direction 294.2 {30.0})	294.2 {30.0}	1373 {140.0} (Axial direction 294.2 {30.0})	294.2 {30.0}	1373 {140.0} (Axial direction 294.2 {30.0})	294.2 {30.0}
Mounting direction		Any					

Notes: 1. For details, see the effective area on p.564.
2. For details, see the port size on p.564.
3. When the main valve pressure is 0.2～0.7MPa [29～102psi.], set the external pilot pressure to the main valve pressure or higher, and 0.7MPa [102psi.] or less.
4. Values when air pressure is 0.5MPa [73psi.]. For switching phase timing, add a maximum of 5ms to the response time of the AC specification. The values for 2-position valves are when used as a single solenoid, and the values for 3-position valves are those when switching from the neutral position of closed center.
5. When used as a double solenoid valve. Excludes **T0.**

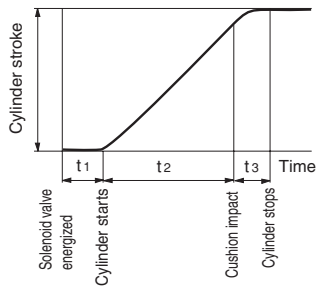
Solenoid Specifications

Item \ Rated voltage		DC12V	DC24V	AC100V	
Voltage range V		10.8～13.2 (12±10%)	21.6～26.4 (24±10%)	90～110 (100±10%)	
Rated frequency Hz		——	——	50	60
Current mA (r.m.s) (when rated voltage is applied)	Starting	——	——	10Note1	10Note1
	Energizing	76	38	10Note1	10Note1
Power consumption W		0.9	0.9	1.0VA	
Allowable leakage current mA		4.0	2.0	2.0	
Type of insulation		Type B			
Insulation resistance Note 2 MΩ		Over 100			
Color of LED indicator Note3		14(SA)：Red, 12(SB)：Green	14(SA)：Red, 12(SB)：Green	14(SA)：Red, 12(SB)：Green	
Surge suppression (as standard)		Flywheel diode		Bridge diode	

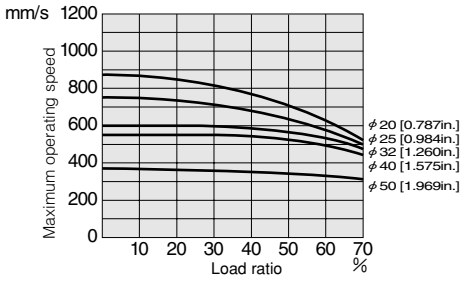
Notes: 1. Since the AC types have built-in bridge diodes, the starting current and energizing current value are virtually the same.
2. Value at DC500V megger.
3. The color of the **T0** indicator is red only.

Cylinder Operating Speed

How to obtain cylinder speed



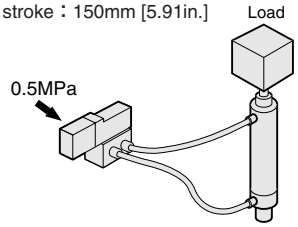
Maximum operating speed



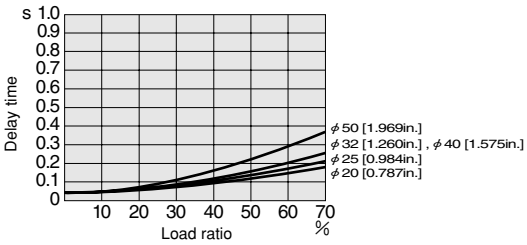
1mm/s = 0.0394in./sec.

Measuring conditions

- Air pressure : 0.5MPa {5.1kgf/cm²} [73psi.]
- Piping (outer diameter×inner diameter×length) : φ6×φ4×1000mm [39in.]
- Fitting : Quick fitting TS6-01
- Load ratio = $\frac{\text{Load}}{\text{Cylinder theoretical thrust}}$ (%)
- Cylinder stroke : 150mm [5.91in.]

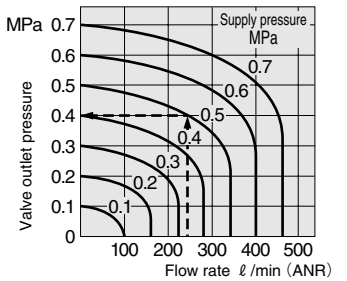


Delay time



Note: Delay time may vary according to the cylinder stroke.

Flow Rate



1MPa = 145psi., 1 ℓ/min = 0.0353ft³/min.

How to read the graph

When the supply pressure is 0.5MPa [73psi.] and flow rate is 240 ℓ/min [8.47ft³/min.] (ANR), the valve outlet pressure becomes 0.4MPa [58psi.].

Port Size

●F10 Series

Description/Piping specification		PR	X(P2)	4(A), 2(B)	1(P), 3(R2), 5(R1), 3, 5(R)
With sub-base		M5×0.8	M5×0.8	Rc1/8	Rc1/8
Single unit	With female thread block	—	—	M5×0.8	M5×0.8
Single unit	With dual-use different size fitting block	—	—	For both φ4 and φ6	M5×0.8
Single unit	With single size fitting block	—	—	φ4 or φ6	M5×0.8
Manifold	Monoblock type with female thread block, and PC board type with female thread block	M5×0.8	M5×0.8	M5×0.8	Rc1/8
Manifold	Monoblock type with fitting block, and PC board type with fitting block	M5×0.8	M5×0.8	For both φ4 and φ6	Rc1/8
Manifold	Monoblock type with single size fitting block, and PC board type with single size fitting block	M5×0.8	M5×0.8	φ4 or φ6	Rc1/8
Manifold	Split type with female thread block, and serial transmission type with female thread block	—	M5×0.8	M5×0.8	Rc1/4
Manifold	Split type with fitting block, and serial transmission type with fitting block	—	M5×0.8	For both φ4 and φ6	For both φ8 and φ10
Manifold	Split type with single size fitting block, and serial transmission type with single size fitting block	—	M5×0.8	φ4 or φ6	φ8, φ10

Effective Area〔Cv〕

●When used as a single unit

mm²

Basic model	Effective area〔Cv〕
F10T0□-A2 F10T1□-A2 F10T2□-A2	5.0〔0.28〕
F10T3□-A2 F10T4□-A2 F10T5□-A2	4.5〔0.25〕
F10T0□-F3 F10T1□-F3 F10T2□-F3	3.8〔0.21〕
F10T3□-F3 F10T4□-F3 F10T5□-F3	3.5〔0.19〕
F10T0□-F4□ F10T1□-F4□ F10T2□-F4□	3.8〔0.21〕
F10T3□-F4□ F10T4□-F4□ F10T5□-F4□	3.5〔0.19〕

mm²

Basic model	Effective area〔Cv〕
F10T0□-F5□ F10T1□-F5□ F10T2□-F5□ F10T3□-F5□ F10T4□-F5□ F10T5□-F5□	3.5〔0.19〕
F10T0□-F6□ F10T1□-F6□ F10T2□-F6□ F10T3□-F6□ F10T4□-F6□ F10T5□-F6□	3.5〔0.19〕

●When mounted on a manifold

mm²

Valve model \ Manifold model		F10M□F(FP)	F10M□A(AP)	F10M□N(P)(S)
F10T0□ F10T1□ F10T2□	Outlet port fittings for both φ4 and φ6	4.5〔0.25〕	4.0〔0.22〕	5.0〔0.28〕
F10T3□ F10T4□ F10T5□	Outlet port female thread	4.5〔0.25〕	4.0〔0.22〕	4.5〔0.25〕
F10T0□ F10T1□ F10T2□	Outlet port φ4 fitting	3.5〔0.19〕	3.3〔0.18〕	4.3〔0.24〕
F10T3□ F10T4□ F10T5□	Outlet port φ6 fitting	3.5〔0.19〕	3.3〔0.18〕	3.8〔0.21〕

Caution: When the individual air supply spacer or the individual air exhaust spacer is used, effective area decreases by about 30%.

Mass

Single Valve Unit Mass

g [oz.]

F10T□□	F10T□□-A1	F10T□□-A2	F10T□□-FJ	F10T□□-FJ5	F10T□□-FJ6
Outlet section None	Outlet section With plate	Outlet section With plate	Outlet section With different size fitting block	Outlet section With ϕ4 fitting block	Outlet section With ϕ6 fitting block
Inlet section None	Inlet section None	Inlet section With A type sub-base	Inlet section None	Inlet section None	Inlet section None
50 [1.76]	53 [1.87]	113 [3.99]	61 [2.15]	63 [2.22]	66 [2.33]

g

F10T□□-FM	F10T□□-F3	F10T□□-F4	F10T□□-F5	F10T□□-F6
Outlet section With female thread block	Outlet section With different size fitting block	Outlet section With female thread block	Outlet section With ϕ4 fitting block	Outlet section With ϕ6 fitting block
Inlet section None	Inlet section With female thread block	Inlet section With female thread block	Inlet section With female thread block	Inlet section With female thread block
57 [2.01]	69 [2.43]	65 [2.29]	71 [2.50]	74 [2.61]

Basic Type **F10T0** is 9g [0.32oz.] less than the mass shown above.

Monoblock Manifold Mass (single valve unit included)

g [oz.]

Monoblock manifold	Mass calculation of each unit			
	4(A), 2(B) ports outlet specifications			
	Female thread	Different size fitting block	ϕ4 fitting block	ϕ6 fitting block
A type	(97×n)+70 [(3.42×n)+2.47]	(101×n)+70 [(3.56×n)+2.47]	(103×n)+70 [(3.63×n)+2.47]	(106×n)+70 [(3.74×n)+2.47]
F type	(76×n)+70 [(2.68×n)+2.47]	(80×n)+70 [(2.82×n)+2.47]	(82×n)+70 [(2.89×n)+2.47]	(85×n)+70 [(3.00×n)+2.47]

Calculation example : **F10M8AM**
stn.1～stn.8 F10T1-A1-PS DC24V
(97×8)+70=846g [29.84oz.]
When mounting a block-off plate, calculate the female thread specification at 45g [1.59oz.] less than the above calculation result per unit, while the different size fitting specifications are 50g [1.76oz.], the ϕ4 fitting specification 52g [1.83oz.], and the ϕ6 fitting specification 55g [1.94oz.] less.
When mounting the **F10T0** specification, subtract 9g [0.32oz.] per unit from the above calculation result.

PC Board Manifold Mass (single valve unit included)

g [oz.]

PC board manifold	Mass calculation of each unit				
	4(A), 2(B) ports outlet specifications				Circuit board and connector section
	Female thread	Different size fitting block	ϕ4 fitting block	ϕ6 fitting block	
A type	(101×n)+70 [(3.56×n)+2.47]	(105×n)+70 [(3.70×n)+2.47]	(107×n)+70 [(3.77×n)+2.47]	(110×n)+70 [(3.88×n)+2.47]	(2×n)+15 [(0.07×n)+0.53]
F type	(76×n)+70 [(2.68×n)+2.47]	(80×n)+70 [(2.82×n)+2.47]	(82×n)+70 [(2.89×n)+2.47]	(85×n)+70 [(3.00×n)+2.47]	

Calculation example : **F10M8APM-F201-W**
stn.1～stn.8 F10T1-A1-PP DC24V
(101×8)+70+(2×8)+15=909g [32.06oz.]
When mounting a block-off plate, calculate the female thread specification at 45g [1.59oz.] less than the above calculation result per unit, while the different size fitting specifications are 50g [1.76oz.], the ϕ4 fitting specification 52g [1.83oz.], and the ϕ6 fitting specification 55g [1.94oz.] less.
When mounting the **F10T0** specification, subtract 9g [0.32oz.] per unit from the above calculation result.

Mass

Mass of Split Type Manifold and Serial Transmission Compatible Type

The split type manifold has the same mass regardless of outlet locations, since the outlet type is the combination of the valve outlet and manifold outlet specifications. The mass can only be changed by the selection of the type of inlet/outlet block.

Mass of Split Manifold Non-Plug-in Type (single valve unit included)

g [oz.]

Non-plug-in type	Mass calculation of each unit			
	4(A), 2(B) ports outlet specifications			
	Female thread	Different size fitting block	ϕ4 fitting block	ϕ6 fitting block
	(70×n)+156 [(2.47×n)+5.50]	(74×n)+156 [(2.61×n)+5.50]	(76×n)+156 [(2.68×n)+5.50]	(79×n)+156 [(2.79×n)+5.50]

g [oz.]

Additional mass			
Piping block specification			
Female thread	Different size fitting block	ϕ8 fitting block	ϕ10 fitting block
141 [4.97]	151 [5.32]	176 [6.21]	185 [6.53]

Calculation example : **F10M8N-MR**
stn.1～stn.8 F10T1-A1-PS DC24V
(70×8)+156+141=857g [30.23oz.]
When mounting a block-off plate, calculate the female thread specification at 45g [1.59oz.] less than the above calculation result per unit, while the different size fitting specifications are 50g [1.76oz.], the ϕ4 fitting specification 52g [1.83oz.], and the ϕ6 fitting specification 55g [1.94oz.] less.
When mounting the **F10T0** specification, subtract 9g [0.32oz.] per unit from the above calculation result.

Mass of Split Manifold Plug-in Type/Serial Transmission Compatible Type (single valve unit included)

g [oz.]

Plug-in type Serial transmission compatible type	Mass calculation of each unit			
	4(A), 2(B) ports outlet specifications			
	Female thread	Different size fitting block	ϕ4 fitting block	ϕ6 fitting block
	(72×n)+156 [(2.54×n)+5.50]	(76×n)+156 [(2.68×n)+5.50]	(78×n)+156 [(2.75×n)+5.50]	(81×n)+156 [(2.86×n)+5.50]

g [oz.]

Additional mass			
Piping block specification			
Female thread	Different size fitting block	ϕ8 fitting block	ϕ10 fitting block
141 [4.97]	151 [5.32]	176 [6.21]	185 [6.53]

g [oz.]

Additional mass			
Wiring block specification			
-F100, -F101	**-F200, -F201, -F260**	**-D250, -D251**	**-T200**
44 [1.55]	46 [1.62]	50 [1.76]	90 [3.17]

g [oz.]

Transmission block mass	
Serial transmission block[Note]	
YS□□	**YS391**
160 [5.64]	110 [3.88]

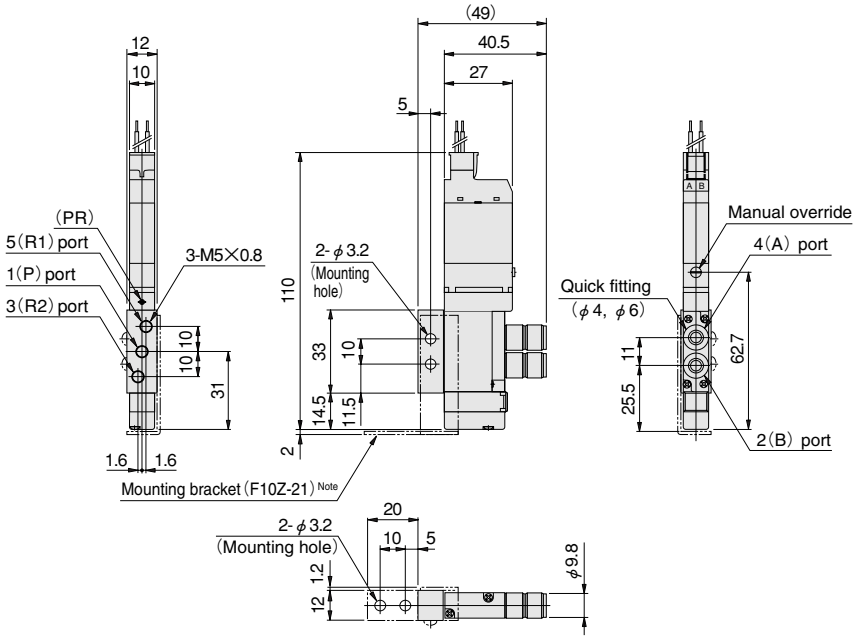
Calculation example : **F10M8PM-MR-F201 DC24V**
stn.1～stn.8 F10T1-A1 DC24V
(72×8)+156+141+46=919g [32.42oz.]
When mounting a block-off plate, calculate the female thread specification at 45g [1.59oz.] less than the above calculation result per unit, while the different size fitting specifications are 50g [1.76oz.], the ϕ4 fitting specification 52g [1.83oz.], and the ϕ6 fitting specification 55g [1.94oz.] less.
When mounting the **F10T0** specification, subtract 9g [0.32oz.] per unit from the above calculation result.
Note : For the serial transmission compatible manifold, add the wiring block **-F201**(46g [1.62oz.]) to the calculation.

F10T

F10T Valve specification -F3-PS

With an outlet port different size fitting block
With an inlet port female thread block
S type plug connector

※For T0 type dimensions, see p.568.

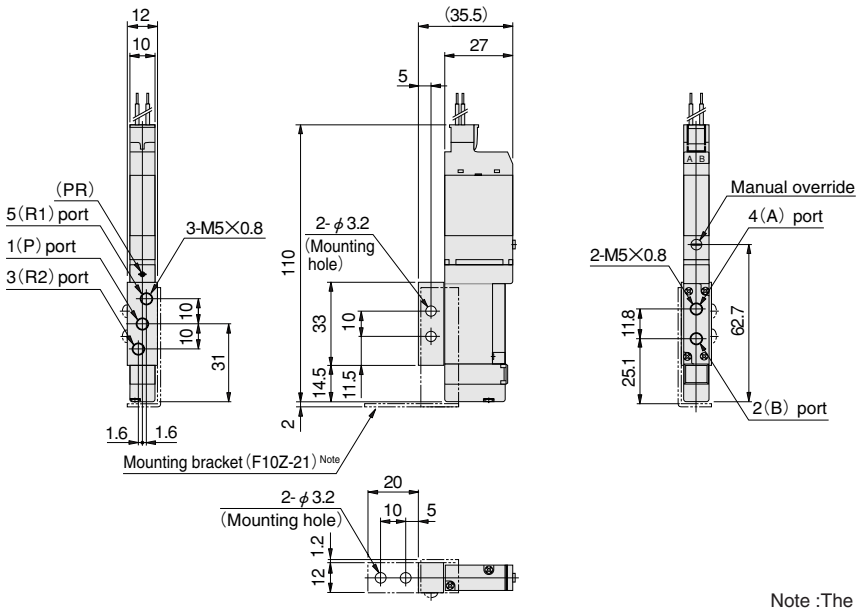


Note : The mounting bracket is an additional part (to be ordered separately).

F10T Valve specification -F4-PS

With an outlet port female thread block
With an inlet port female thread block
S type plug connector

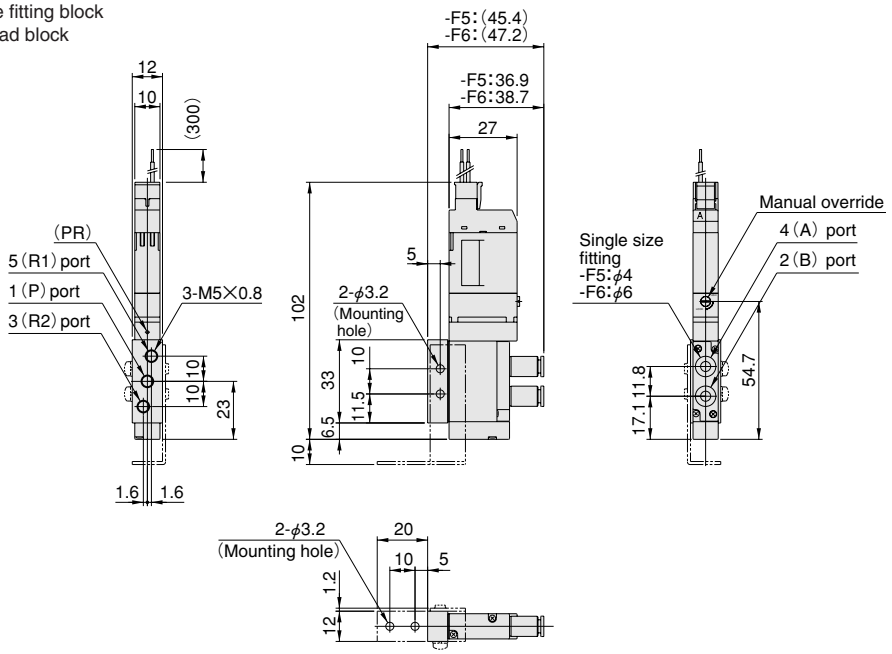
※For T0 type dimensions, see p.568.



Note :The mounting bracket is an additional part (to be ordered separately).

F10T0-F□-PS

With an outlet port single size fitting block
With an inlet port female thread block
S type plug connector



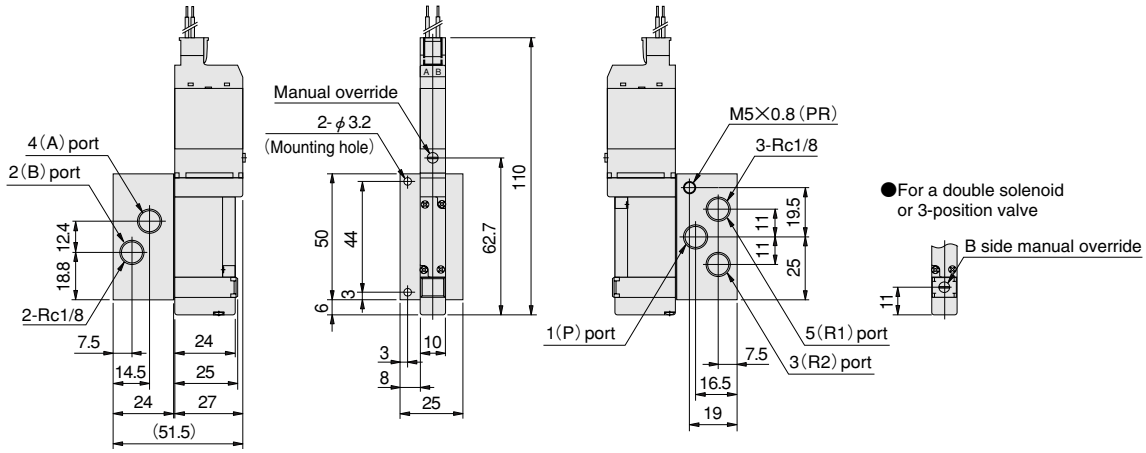
Note :The mounting bracket is an additional part (to be ordered separately).

F10T

F10T Valve specification Operation type -A2-PS

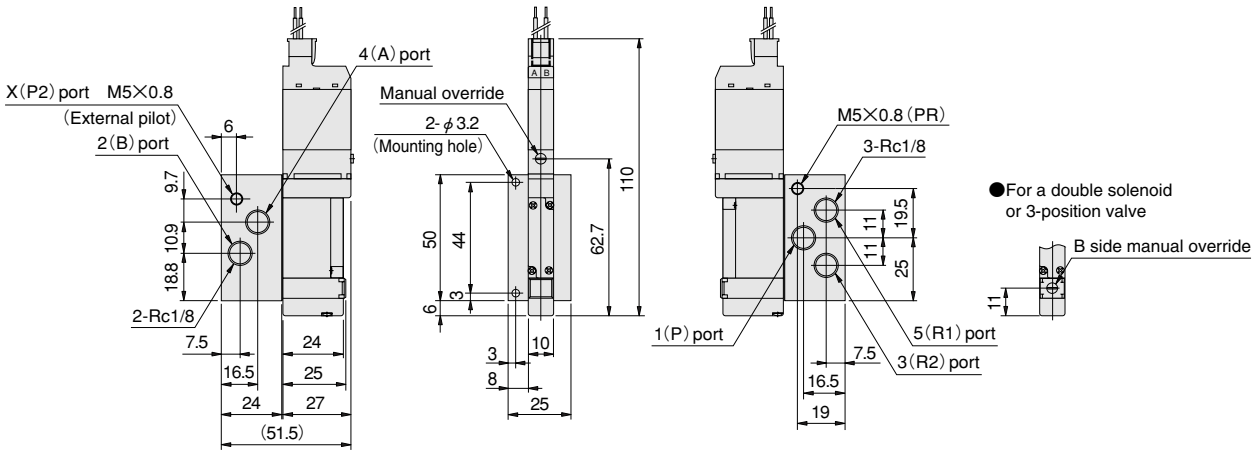
With an A type sub-base
S type plug connector

●Internal pilot specification



Note: The overall valve length of the T0 type is 8mm [0.315in.] shorter (the end cover protrusion is 8mm [0.315in.] shorter).

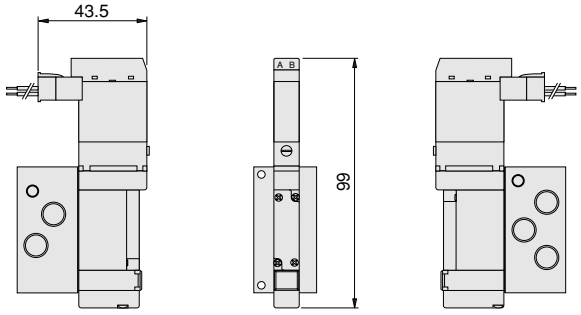
●External pilot specification



Note: The overall valve length of the T0 type is 8mm [0.315in.] shorter (the end cover protrusion is 8mm [0.315in.] shorter).

Option

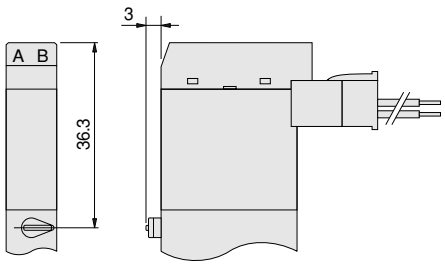
●L type plug connector : **-PL**



Note: The overall valve length of the T0 type is 8mm [0.315in.] shorter
(the end cover protrusion is 8mm [0.315in.] shorter).

Made to Order

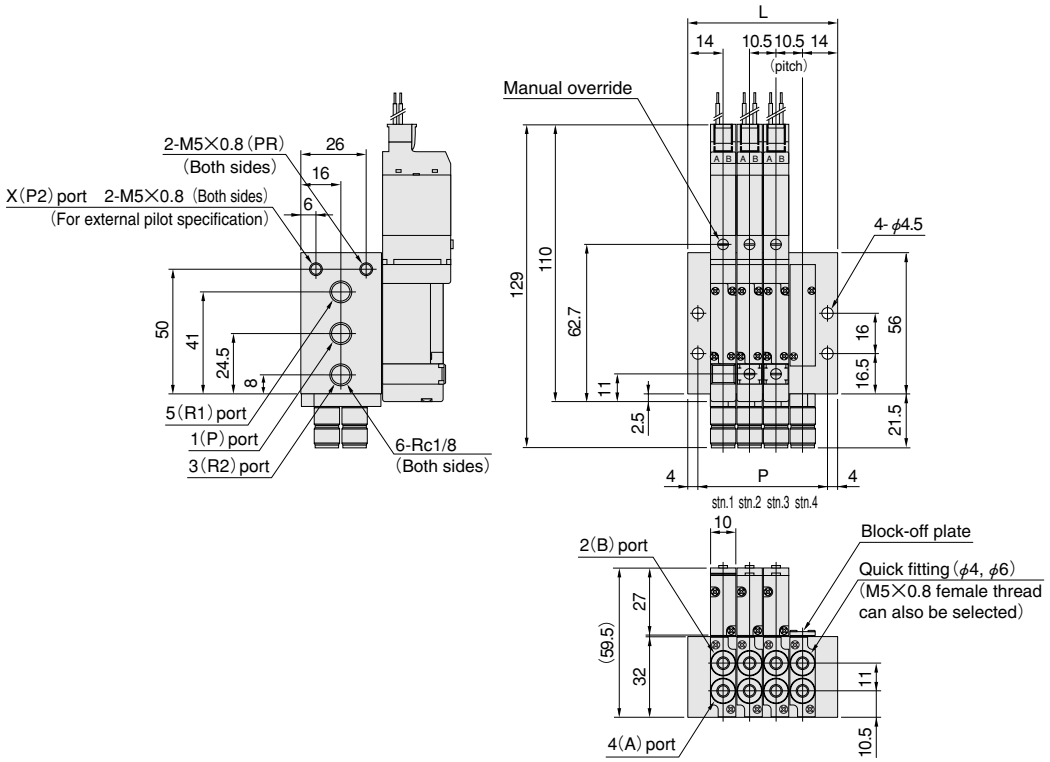
●Manual override lever



F10M Number of units A J/M Pilot specification (base piping type)

F10MA

Monoblock manifold A type
Manifold with outlet port different size fitting blocks
S type plug connector

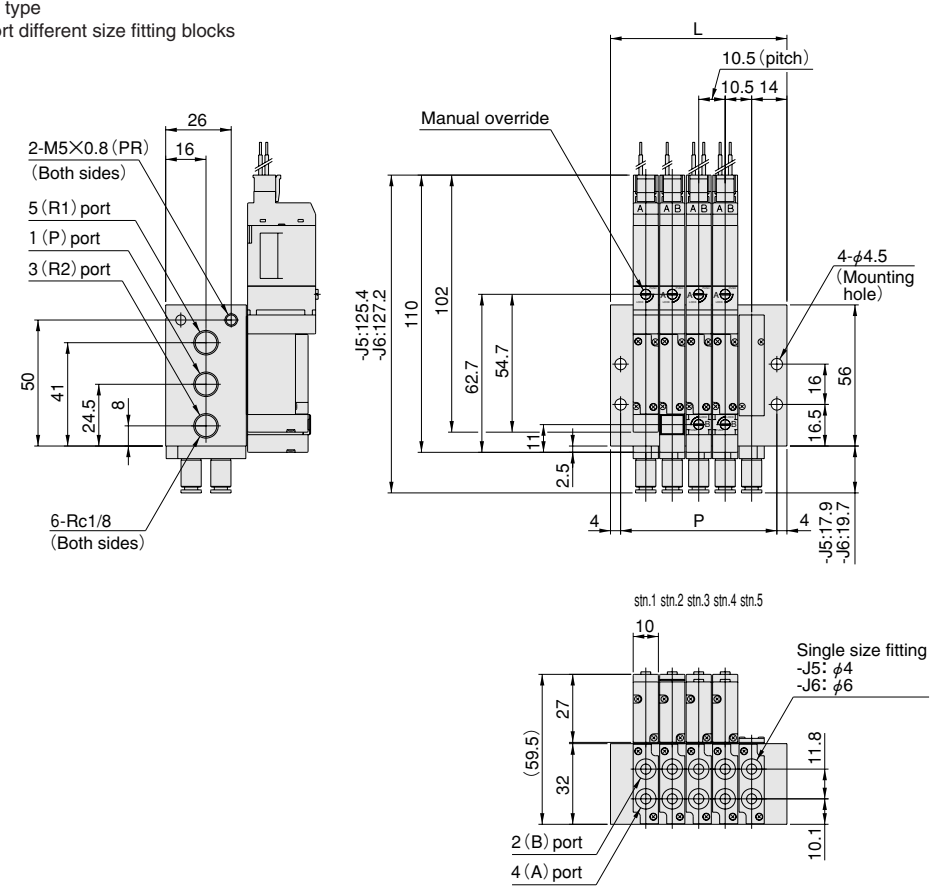


Unit dimensions

Number of units	L	P
2	38.5	30.5
3	49.0	41.0
4	59.5	51.5
5	70.0	62.0
6	80.5	72.5
7	91.0	83.0
8	101.5	93.5
9	112.0	104.0
10	122.5	114.5
11	133.0	125.0
12	143.5	135.5
13	154.0	146.0
14	164.5	156.5
15	175.0	167.0
16	185.5	177.5
17	196.0	188.0
18	206.5	198.5
19	217.0	209.0
20	227.5	219.5

F10M Number of units AL Pilot specification (base piping type)

Monoblock manifold A type
Manifold with outlet port different size fitting blocks
S type plug connector



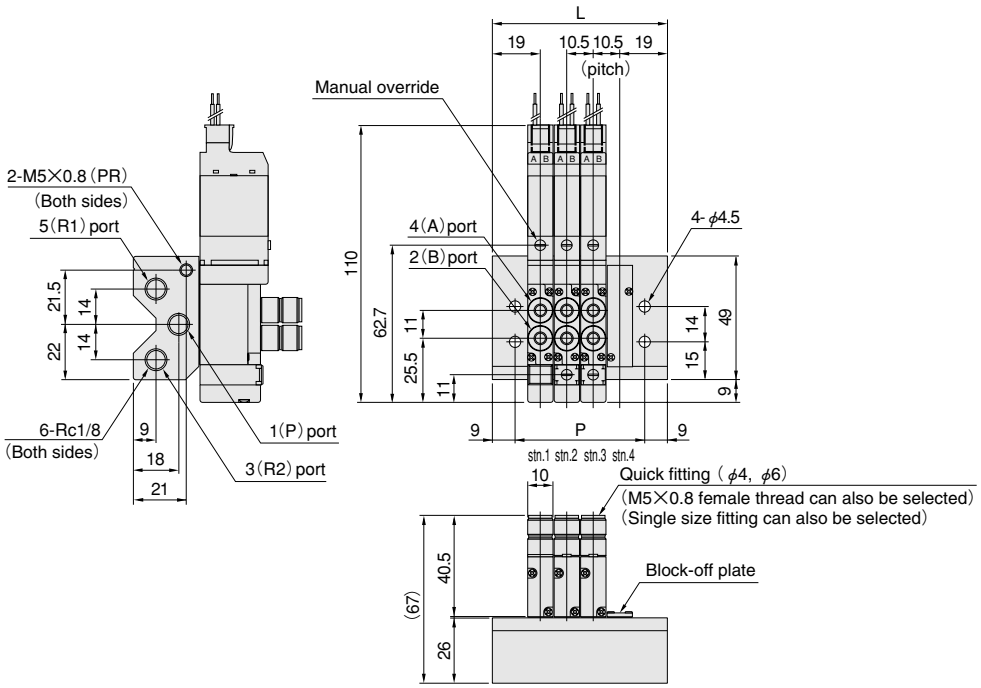
Unit dimensions

Number of units	L	P
2	38.5	30.5
3	49.0	41.0
4	59.5	51.5
5	70.0	62.0
6	80.5	72.5
7	91.0	83.0
8	101.5	93.5
9	112.0	104.0
10	122.5	114.5
11	133.0	125.0
12	143.5	135.5
13	154.0	146.0
14	164.5	156.5
15	175.0	167.0
16	185.5	177.5
17	196.0	188.0
18	206.5	198.5
19	217.0	209.0
20	227.5	219.5

F10M Number of units F (direct piping type)

F10MF

Monoblock manifold F type
Valves with outlet port different size fitting blocks
S type plug connector



Unit dimensions

Number of units	L	P
2	48.5	30.5
3	59.0	41.0
4	69.5	51.5
5	80.0	62.0
6	90.5	72.5
7	101.0	83.0
8	111.5	93.5
9	122.0	104.0
10	132.5	114.5
11	143.0	125.0
12	153.5	135.5
13	164.0	146.0
14	174.5	156.5
15	185.0	167.0
16	195.5	177.5
17	206.0	188.0
18	216.5	198.5
19	227.0	209.0
20	237.5	219.5

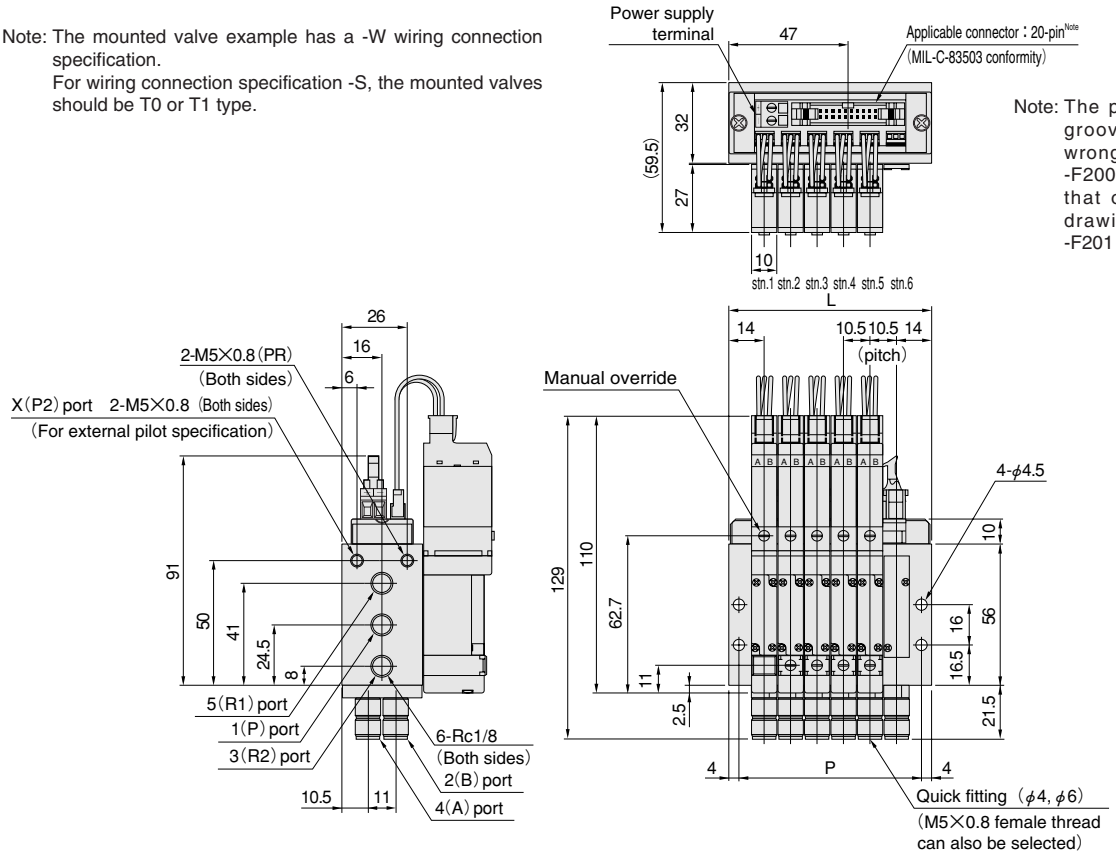
Note: The overall valve length of the T0 type is 8mm [0.315in.] shorter (the end cover protrusion is 8mm [0.315in.] shorter).

F10M [Number of units] AP $^{J}_{M}$ [Pilot specification] (base piping type)

F10MAPJ

PC board manifold A type
Manifold with outlet port different size fitting blocks

Note: The mounted valve example has a -W wiring connection specification.
For wiring connection specification -S, the mounted valves should be T0 or T1 type.



Note: The position of the groove preventing wrong insertions of -F200 is reversed to that of -F201. The drawing shows the -F201 case.

Unit dimensions

Number of units	L	P
6	80.5	72.5
8	101.5	93.5
10	122.5	114.5
12	143.5	135.5
14	164.5	156.5
16	185.5	177.5

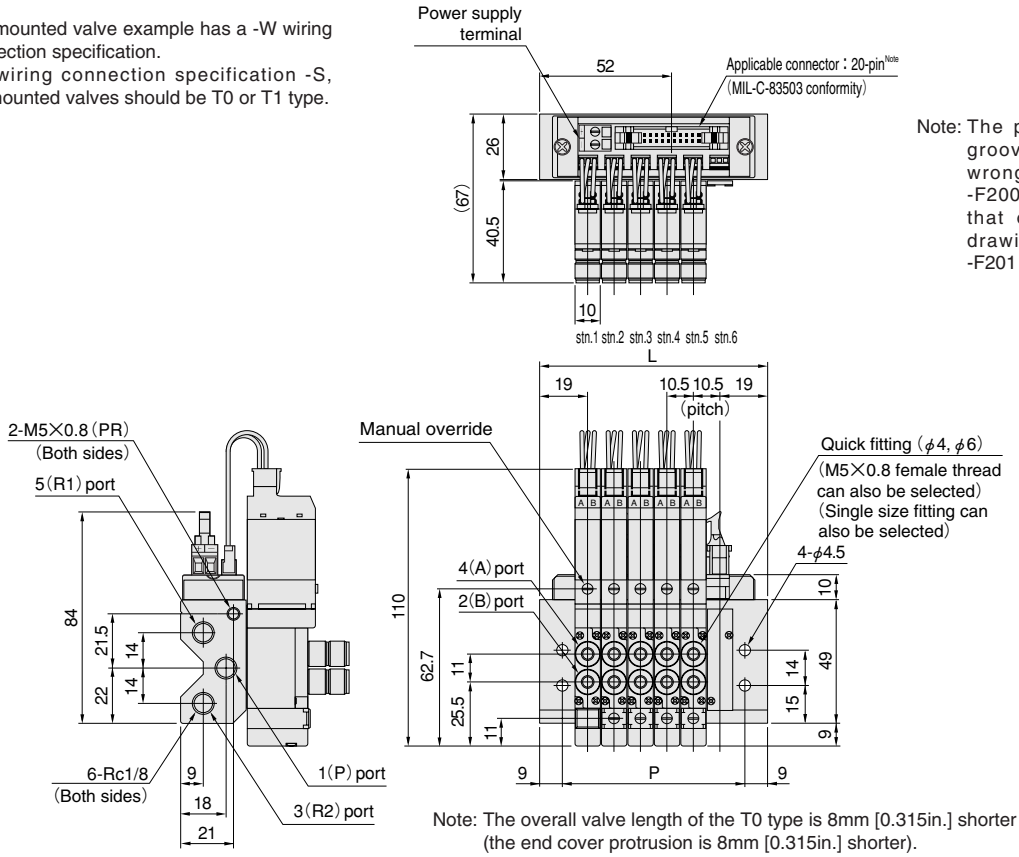
Note: Wiring connection specification
For -S
6, 8,10,12,14,16 units
For -W
6, 8 units

F10M [Number of units] FP (direct piping type)

F10MFP

PC board manifold F type
Valves with outlet port different size fitting blocks

Note: The mounted valve example has a -W wiring connection specification.
For wiring connection specification -S, the mounted valves should be T0 or T1 type.



Note: The position of the groove preventing wrong insertions of -F200 is reversed to that of -F201. The drawing shows the -F201 case.

Unit dimensions

Number of units	L	P
6	90.5	72.5
8	111.5	93.5
10	132.5	114.5
12	153.5	135.5
14	174.5	156.5
16	195.5	177.5

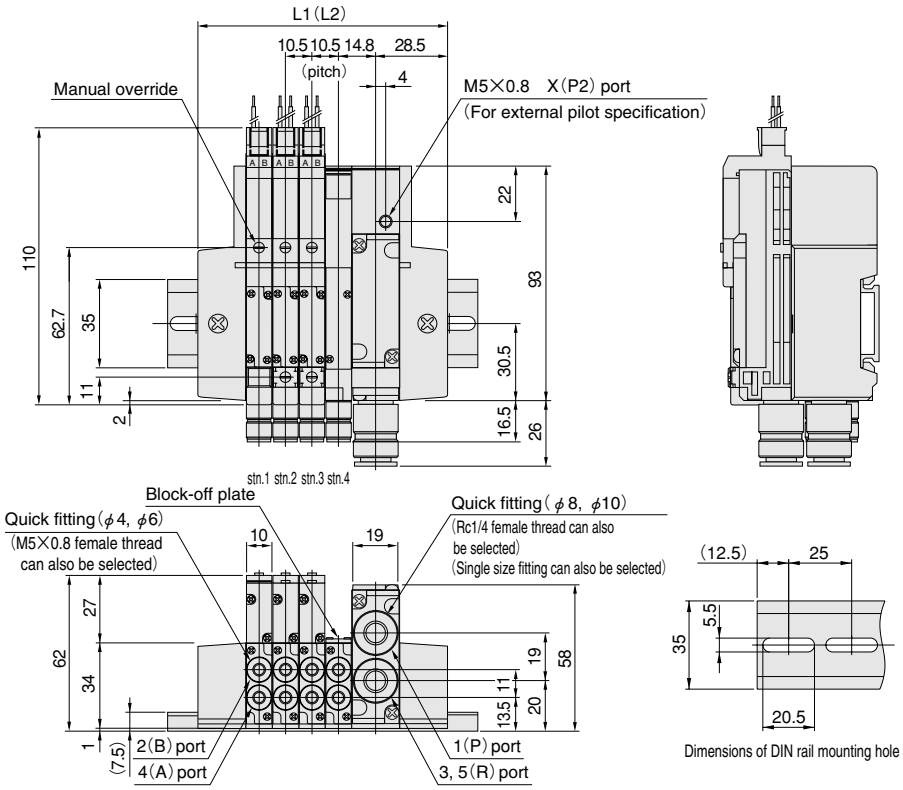
Note: Wiring connection specification
For -S
6, 8,10,12,14,16 units
For -W
6, 8 units

Note: The overall valve length of the T0 type is 8mm [0.315in.] shorter (the end cover protrusion is 8mm [0.315in.] shorter).

F10M [Number of units] N J/M [Pilot specification] (base piping type)

F10MNJ

Manifold with outlet port different size fitting blocks
S type plug connector



Unit dimensions

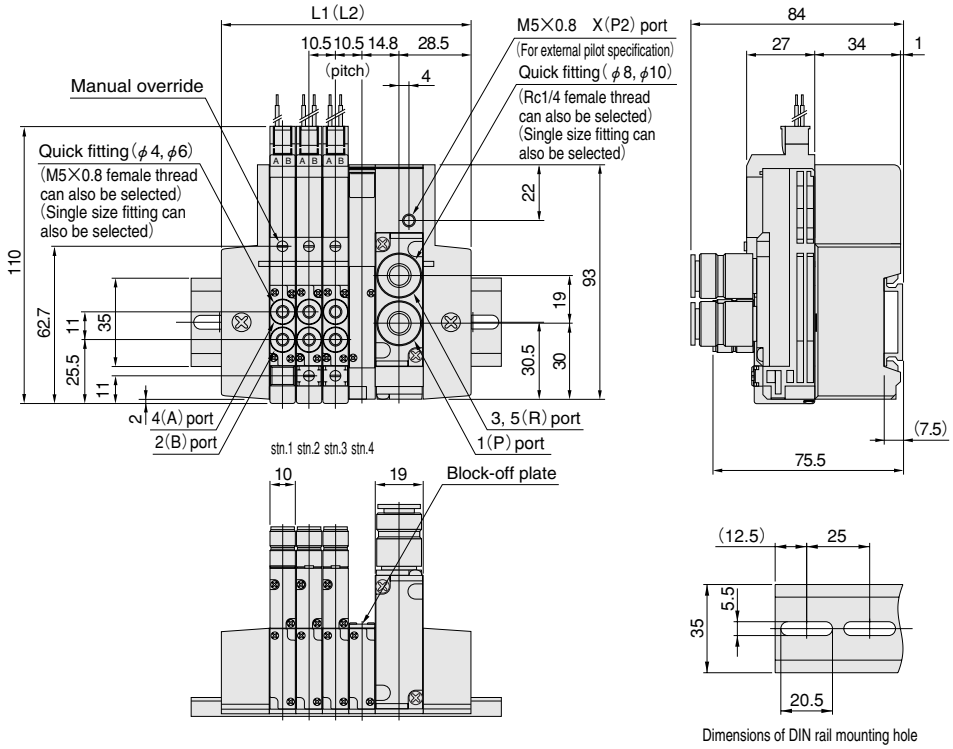
Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	78.0	125	97.0	125
3	88.5	125	107.5	150
4	99.0	125	118.0	150
5	109.5	150	128.5	175
6	120.0	150	139.0	175
7	130.5	175	149.5	175
8	141.0	175	160.0	200
9	151.5	200	170.5	200
10	162.0	200	181.0	225
11	172.5	200	191.5	225
12	183.0	225	202.0	250
13	193.5	225	212.5	250
14	204.0	250	223.0	250
15	214.5	250	233.5	275
16	225.0	275	244.0	275
17	235.5	275	254.5	300
18	246.0	275	265.0	300
19	256.5	300	275.5	325
20	267.0	300	286.0	325

Note: When using 2 piping blocks.

F10M [Number of units] N [Pilot specification] (direct piping type)

F10MN

Valves with outlet port different size fitting blocks
S type plug connector



Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	78.0	125	97.0	125
3	88.5	125	107.5	150
4	99.0	125	118.0	150
5	109.5	150	128.5	175
6	120.0	150	139.0	175
7	130.5	175	149.5	175
8	141.0	175	160.0	200
9	151.5	200	170.5	200
10	162.0	200	181.0	225
11	172.5	200	191.5	225
12	183.0	225	202.0	250
13	193.5	225	212.5	250
14	204.0	250	223.0	250
15	214.5	250	233.5	275
16	225.0	275	244.0	275
17	235.5	275	254.5	300
18	246.0	275	265.0	300
19	256.5	300	275.5	325
20	267.0	300	286.0	325

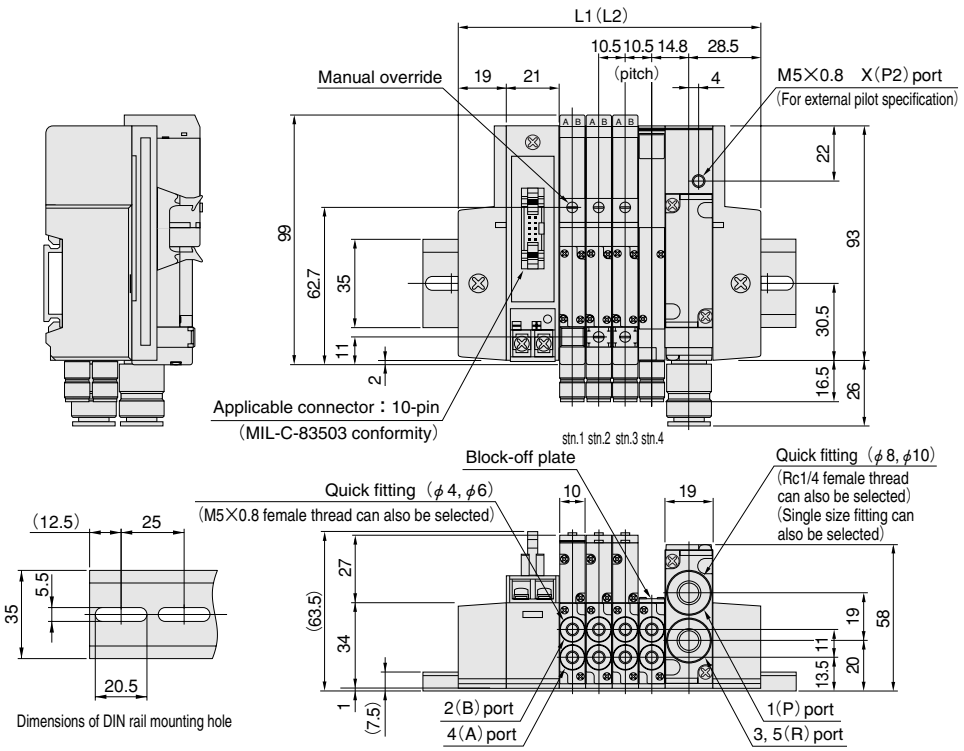
Note: When using 2 piping blocks.

Note: The overall valve length of the T0 type is 8mm [0.315in.] shorter (the end cover protrusion is 8mm [0.315in.] shorter).

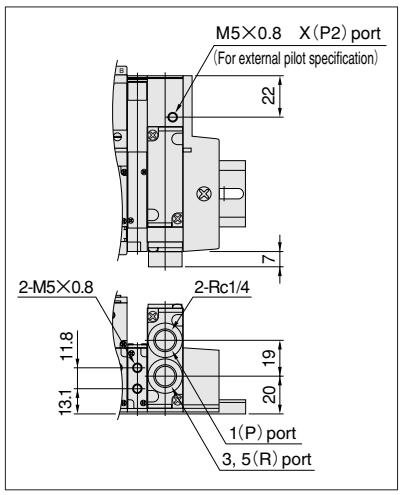
Combination of F10MPJ and F10-CONT

F10M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
Flat cable connector 10-pin specification



Female thread specification (mm)



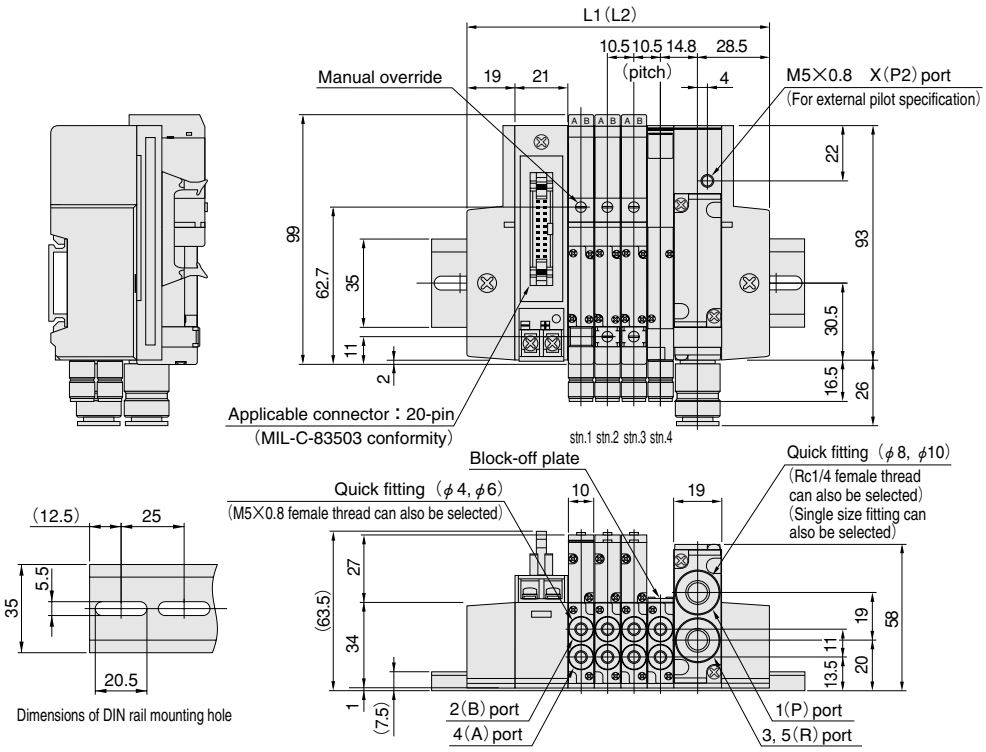
Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	99.0	125	118.0	150
3	109.5	150	128.5	175
4	120.0	150	139.0	175
5	130.5	175	149.5	175
6	141.0	175	160.0	200
7	151.5	200	170.5	200
8	162.0	200	181.0	225

Note: When using 2 piping blocks.

F10M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
Flat cable connector 20-pin specification



Unit dimensions

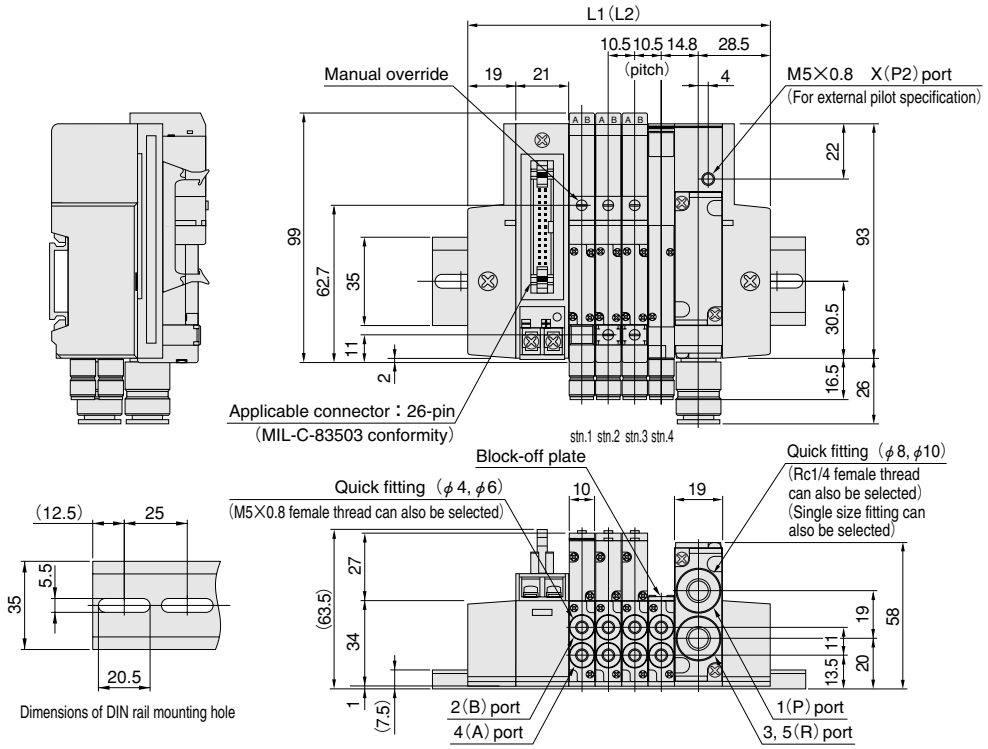
Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	99.0	125	118.0	150
3	109.5	150	128.5	175
4	120.0	150	139.0	175
5	130.5	175	149.5	175
6	141.0	175	160.0	200
7	151.5	200	170.5	200
8	162.0	200	181.0	225
9	172.5	200	191.5	225
10	183.0	225	202.0	250
11	193.5	225	212.5	250
12	204.0	250	223.0	250
13	214.5	250	233.5	275
14	225.0	275	244.0	275
15	235.5	275	254.5	300
16	246.0	275	265.0	300

Note: When using 2 piping blocks.

Combination of F10MPJ and F10-CONT

F10M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
Flat cable connector 26-pin specification



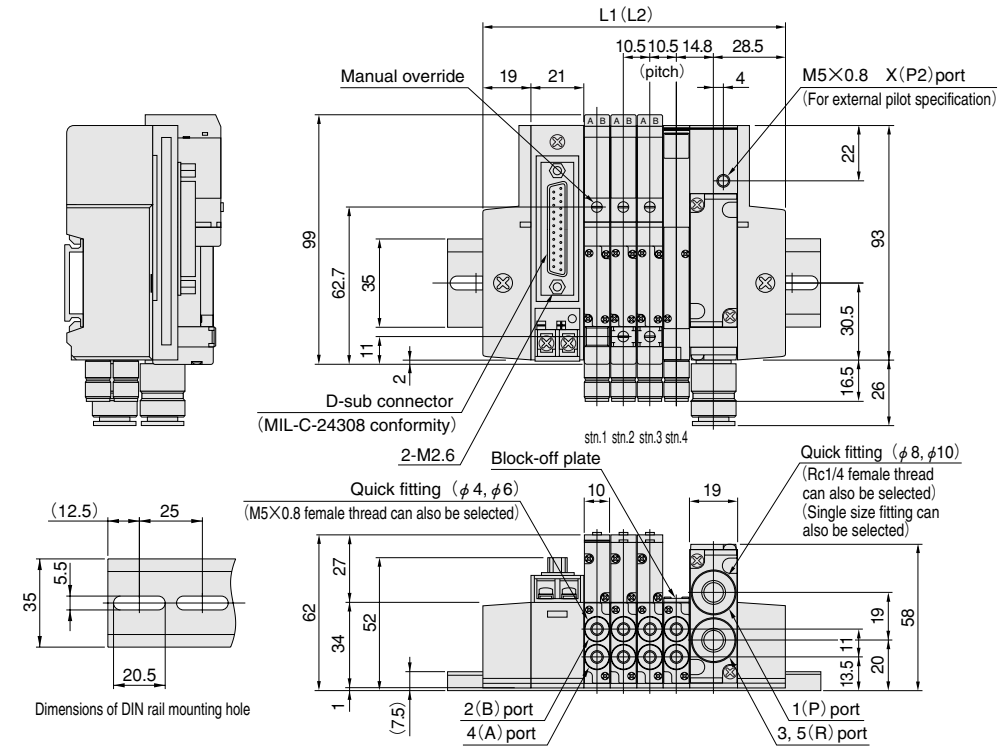
Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	99.0	125	118.0	150
3	109.5	150	128.5	175
4	120.0	150	139.0	175
5	130.5	175	149.5	175
6	141.0	175	160.0	200
7	151.5	200	170.5	200
8	162.0	200	181.0	225
9	172.5	200	191.5	225
10	183.0	225	202.0	250
11	193.5	225	212.5	250
12	204.0	250	223.0	250
13	214.5	250	233.5	275
14	225.0	275	244.0	275
15	235.5	275	254.5	300
16	246.0	275	265.0	300
17	256.5	300	275.5	325
18	267.0	300	286.0	325
19	277.5	325	296.5	325
20	288.0	325	307.0	350

Note: When using 2 piping blocks.

F10M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
D-sub connector 25-pin specification



Unit dimensions

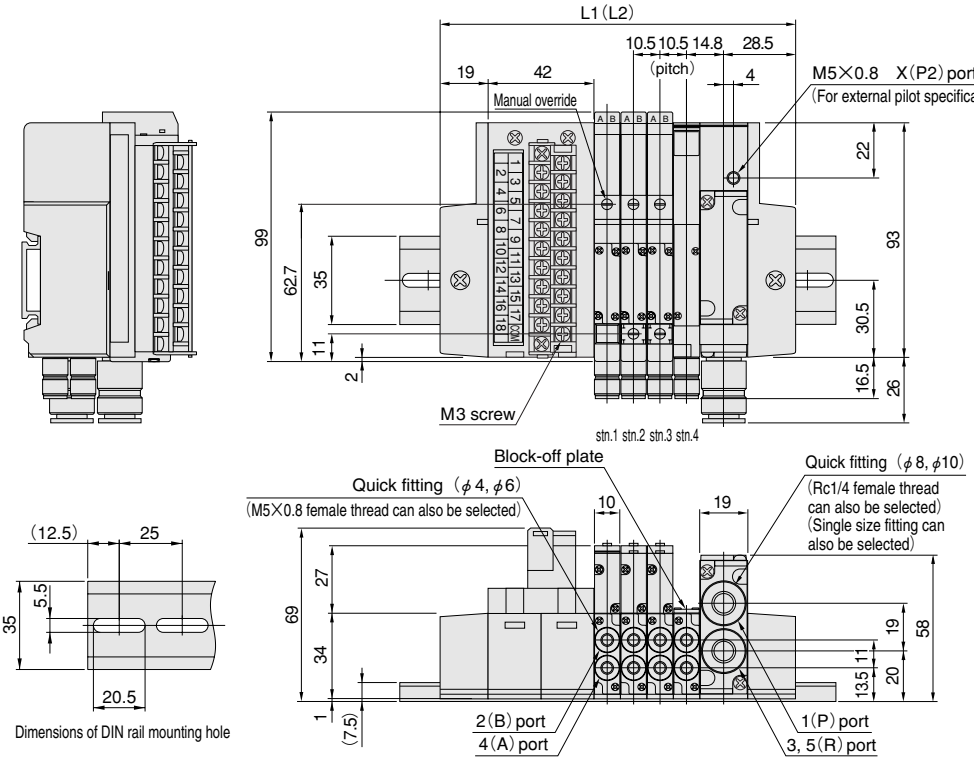
Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	99.0	125	118.0	150
3	109.5	150	128.5	175
4	120.0	150	139.0	175
5	130.5	175	149.5	175
6	141.0	175	160.0	200
7	151.5	200	170.5	200
8	162.0	200	181.0	225
9	172.5	200	191.5	225
10	183.0	225	202.0	250
11	193.5	225	212.5	250
12	204.0	250	223.0	250
13	214.5	250	233.5	275
14	225.0	275	244.0	275
15	235.5	275	254.5	300
16	246.0	275	265.0	300
17	256.5	300	275.5	325
18	267.0	300	286.0	325
19	277.5	325	296.5	325
20	288.0	325	307.0	350

Note: When using 2 piping blocks.

F10M [Number of units] P J/M [Pilot specification] (base piping type)

Combination of F10MPJ and F10-CONT

Manifold with outlet port different size fitting blocks
Terminal block type



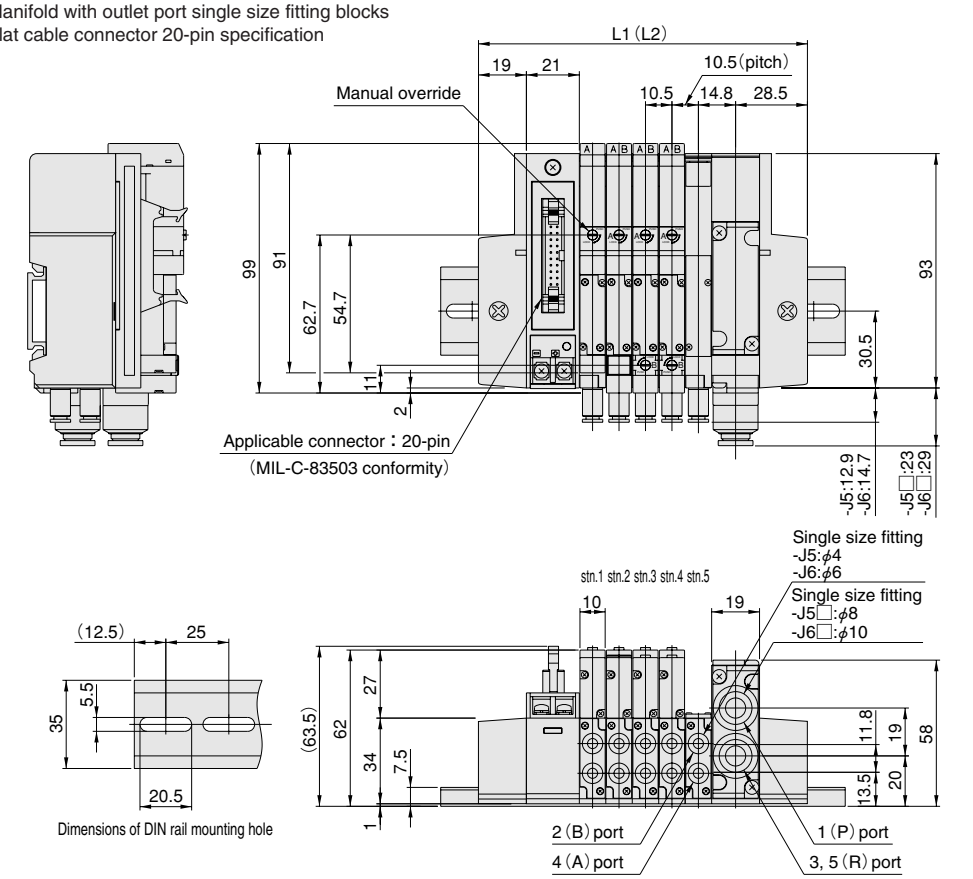
Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	120.0	150	139.0	175
3	130.5	175	149.5	175
4	141.0	175	160.0	200
5	151.5	200	170.5	200
6	162.0	200	181.0	225
7	172.5	200	191.5	225
8	183.0	225	202.0	250
9	193.5	225	212.5	250
10	204.0	250	223.0	250
11	214.5	250	233.5	275
12	225.0	275	244.0	275
13	235.5	275	254.5	300
14	246.0	275	265.0	300
15	256.5	300	275.5	325
16	267.0	300	286.0	325
17	277.5	325	296.5	325
18	288.0	325	307.0	350

Note: When using 2 piping blocks.

F10M [Number of units] PL [Pilot specification] (base piping type)

Manifold with outlet port single size fitting blocks
Flat cable connector 20-pin specification



Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	99.0	125	118.0	150
3	109.5	150	128.5	175
4	120.0	150	139.0	175
5	130.5	175	149.5	175
6	141.0	175	160.0	200
7	151.5	200	170.5	200
8	162.0	200	181.0	225
9	172.5	200	191.5	225
10	183.0	225	202.0	250
11	193.5	225	212.5	250
12	204.0	250	223.0	250
13	214.5	250	233.5	275
14	225.0	275	244.0	275
15	235.5	275	254.5	300
16	246.0	275	265.0	300

Note: When using 2 piping blocks.

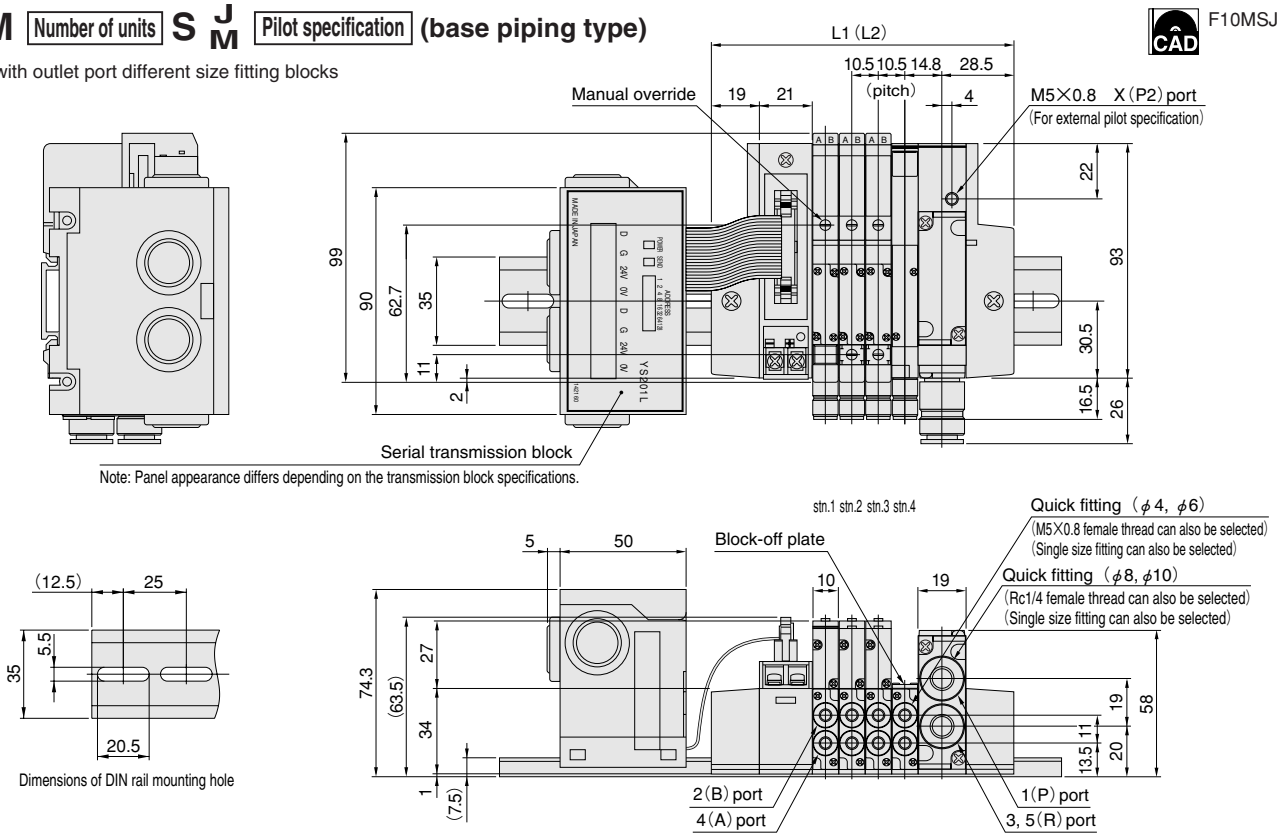
F10 Series Dimensions of Serial Transmission Compatible Manifold (mm)

※For the dimensions of the manifold for the OMRON CompoBus / D, see p.578.

F10M Number of units S J M Pilot specification (base piping type)

F10MSJ

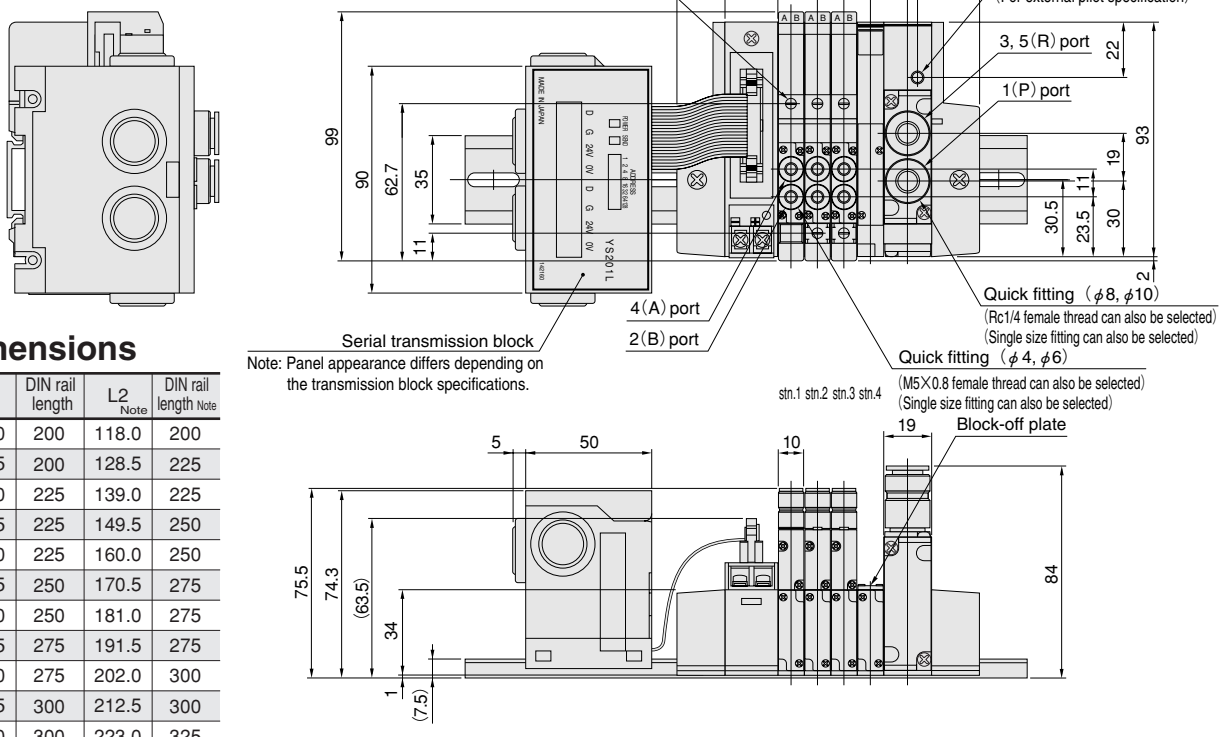
Manifold with outlet port different size fitting blocks



F10M Number of units S Pilot specification (direct piping type)

F10MS

Valves with outlet port different size fitting blocks



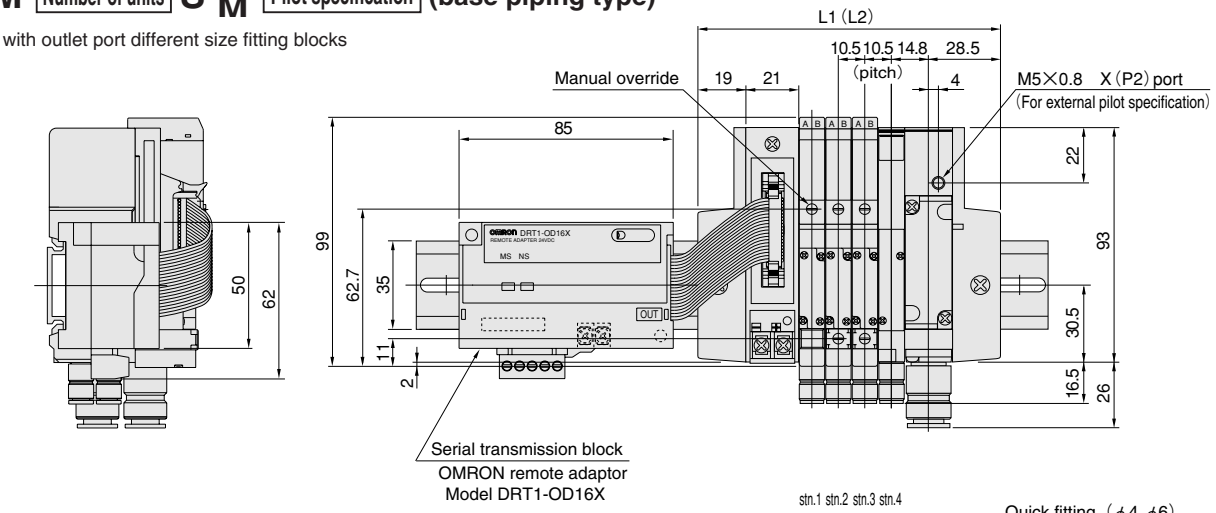
Unit dimensions

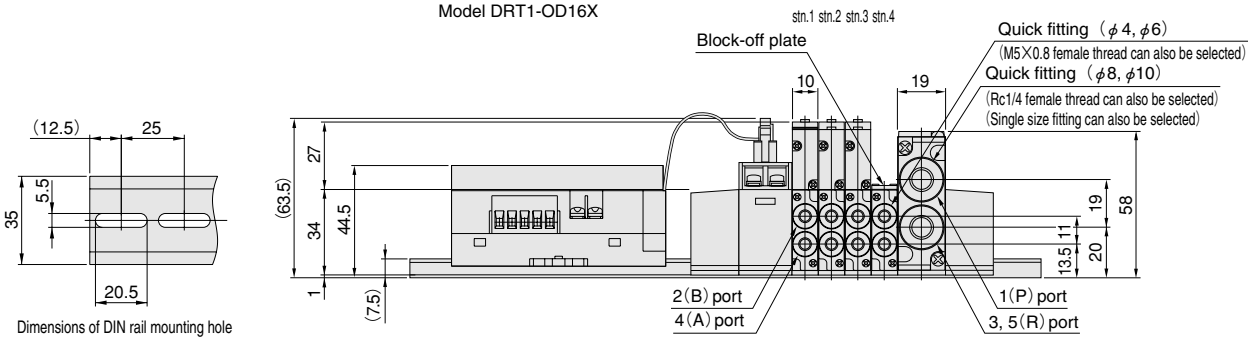
Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	99.0	200	118.0	200
3	109.5	200	128.5	225
4	120.0	225	139.0	225
5	130.5	225	149.5	250
6	141.0	225	160.0	250
7	151.5	250	170.5	275
8	162.0	250	181.0	275
9	172.5	275	191.5	275
10	183.0	275	202.0	300
11	193.5	300	212.5	300
12	204.0	300	223.0	325
13	214.5	300	233.5	325
14	225.0	325	244.0	350
15	235.5	325	254.5	350
16	246.0	350	265.0	350

Note: When using 2 piping blocks.

F10M [Number of units] S [J/M] [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks





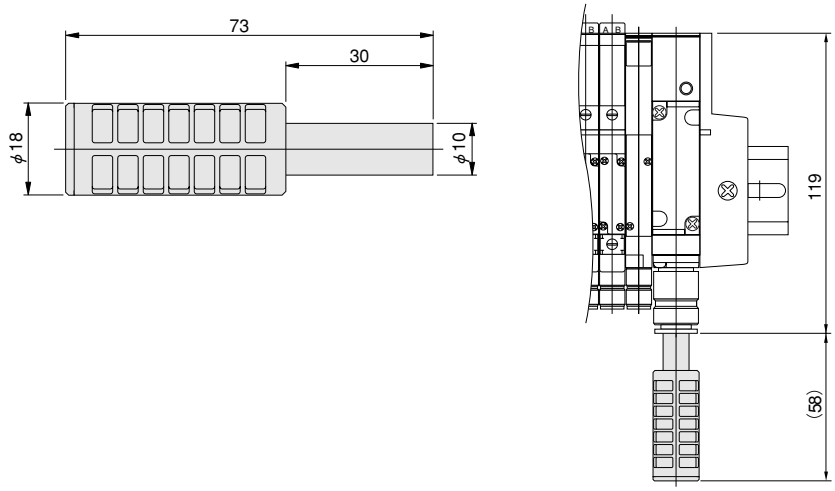
Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	99.0	225	118.0	250
3	109.5	225	128.5	250
4	120.0	250	139.0	250
5	130.5	250	149.5	275
6	141.0	275	160.0	275
7	151.5	275	170.5	300
8	162.0	275	181.0	300
9	172.5	300	191.5	325
10	183.0	300	202.0	325
11	193.5	325	212.5	350
12	204.0	325	223.0	350
13	214.5	325	233.5	350
14	225.0	350	244.0	375
15	235.5	350	254.5	375
16	246.0	380	265.0	375

Note : When using 2 piping blocks.

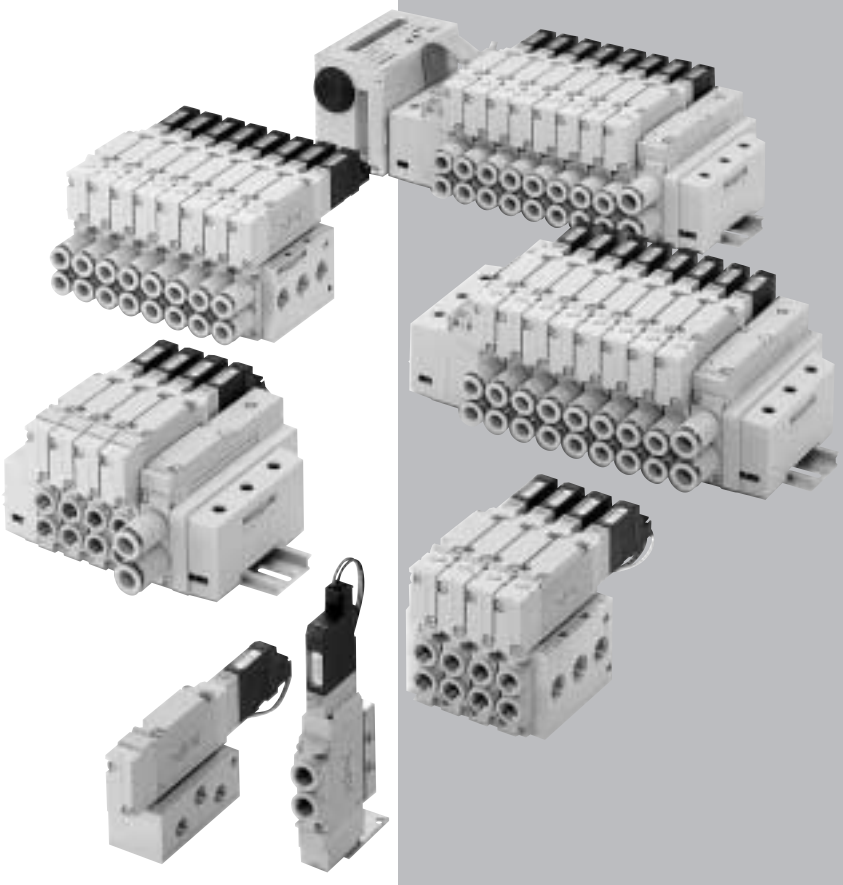
Additional Parts (To be ordered separately)

●Muffler: **KM-J10** [For both the plug-in and non-plug-in types]



SOLENOID VALVES
F15 SERIES

INDEX



Specifications

Basic Models and Valve Functions

Item \ Basic model	F15T0	F15T1 F15T2	F15T3 F15T4 F15T5
Number of positions	2 positions		3 positions
Number of ports	5		
Valve function	Single solenoid only	Both single and double solenoid use	Closed center, Exhaust center, Pressure center

Remark: For the optional specifications and order codes, see p.525～552.

Specifications

Item \ Basic model		F15T0 F15T1 F15T2	F15T3 F15T4 F15T5	F15T0G F15T1G F15T2G	F15T3G F15T4G F15T5G	F15T0V F15T1V F15T2V	F15T3V
Media		Air					
Operation type		Internal pilot type		External pilot type (for positive pressure)		External pilot type (for vacuum)	
Effective area〔CV〕Note1 mm²		10〔0.56〕					
Port size Note2		Fitting for φ6 and φ8, Rc1/8		M5×0.8, Fitting for φ6 and φ8, Rc1/8			
Lubrication		Not required					
Operating pressure range	Main valve	0.15～0.7MPa {1.5～7.1kgf/cm²} [22～102psi.]		0～0.7MPa {0～7.1kgf/cm²}Note3 [0～102psi.]		0.15MPa～−100kPa {1.5kgf/cm²～−750.1mmHg} [22psi.～−29.53in.Hg]	
	External pilot	——		0.2～0.7MPa {2～7.1kgf/cm²}Note3 [29～102psi.]		0.2～0.7MPa {2～7.1kgf/cm²} [29～102psi.]	
Proof pressure MPa {kgf/cm²} [psi.]		1.05 {10.7} [152]					
Response time Note4 ON/OFF time ms	DC12V, DC24V	20/30 or below	15/50 or below	20/30 or below	15/50 or below	20/30 or below	15/50 or below
	AC100V	20/30 or below	15/50 or below	20/30 or below	15/50 or below	20/30 or below	15/50 or below
Maximum operating frequency Hz		5					
Minimum time to energize for self holding Note5 ms		50	——	50	——	50	——
Operating temperature range (atmosphere and media) °C [°F]		5～50 [41～122]					
Shock resistance m/s² {G}		1373 {140.0} (Axial direction 294.2 {30.0})	294.2 {30.0}	1373 {140.0} (Axial direction 294.2 {30.0})	294.2 {30.0}	1373 {140.0} (Axial direction 294.2 {30.0})	294.2 {30.0}
Mounting direction		Any					

Notes: 1. For details, see the effective area on p.582.
2. For details, see the port size on p.582.
3. When the main valve pressure is 0.2～0.7MPa [29～102psi.], set the external pilot pressure to the main valve pressure or higher, and to 0.7MPa [102psi.] or less.
4. Values when air pressure is 0.5MPa [73psi.]. For switching phase timing, add a maximum of 5ms to the response time of the AC specification. The values for 2-position valves are when used as a single solenoid, and the values for 3-position valves are those when switching from the neutral position of closed center.
5. When used as a double solenoid valve. Excludes **T0.**

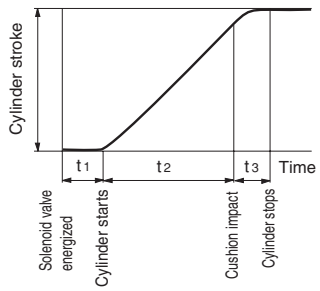
Solenoid Specifications

Item \ Rated voltage		DC12V	DC24V	AC100V	
Voltage range V		10.8～13.2 (12±10%)	21.6～26.4 (24±10%)	90～110 (100±10%)	
Rated frequency Hz		——	——	50	60
Current mA (r.m.s)	Starting	——	——	10Note 1	10Note 1
(when rated voltage is applied)	Energizing	76	38	10Note 1	10Note 1
Power consumption W		0.9	0.9	1.0VA	
Allowable leakage current mA		4.0	2.0	2.0	
Type of insulation		Type B			
Insulation resistance Note 2 MΩ		Over 100			
Color of LED indicator Note3		14(SA)：Red, 12(SB)：Green	14(SA)：Red, 12(SB)：Green	14(SA)：Red, 12(SB)：Green	
Surge suppression (as standard)		Flywheel diode		Bridge diode	

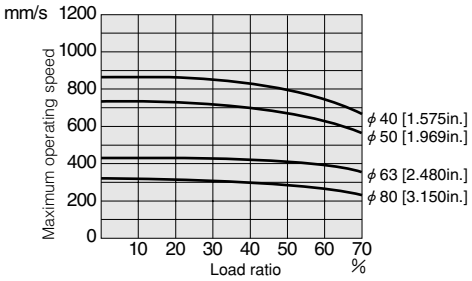
Notes: 1. Since the AC types have built-in bridge diodes, the starting current and energizing current value are virtually the same.
2. Value at DC500V megger.
3. The color of the **T0** indicator is red only.

Cylinder Operating Speed

How to obtain cylinder speed

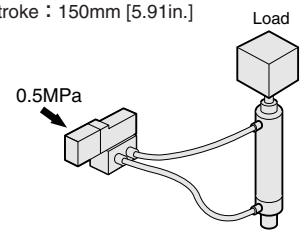


Maximum operating speed

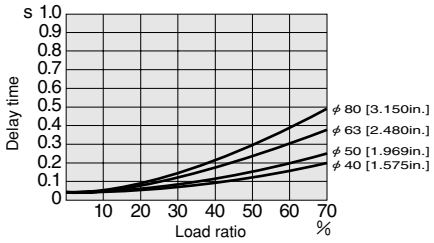


Measuring conditions

- Air pressure : 0.5MPa {5.1kgf/cm²} [73psi.]
- Piping (outer diameter×inner diameter× length) : ϕ8×ϕ6×1000mm [39in.]
- Fitting : Quick fitting TS8-01
- Load ratio = $\frac{\text{Load}}{\text{Cylinder theoretical thrust}}$ (%)
- Cylinder stroke : 150mm [5.91in.]

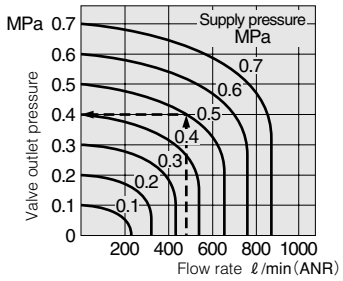


Delay time



Note: Delay time may vary according to the cylinder stroke.

Flow Rate



How to read the graph

When the supply pressure is 0.5MPa [73psi.] and flow rate is 500 ℓ/min [17.7ft³/min.] (ANR), the valve outlet pressure becomes 0.4MPa [58psi.].

1mm/s = 0.0394in./sec.
1MPa = 145psi.
1 ℓ/min = 0.0353 ℓ/min.

Port Size

●F15 Series

Description/Piping specification		PR	X(P2)	4(A), 2(B)	1(P), 3(R2), 5(R1), 3, 5(R)
With sub-base		M5×0.8	M5×0.8	Rc1/8	Rc1/8
Single unit	With female thread block	—	—	Rc1/8	Rc1/8
	With dual-use different size fitting block	—	—	For both ϕ6 and ϕ8	Rc1/8
	With single size fitting block	—	—	ϕ6 or ϕ8	Rc1/8
Manifold	Monoblock type with female thread block, and PC board type with female thread block	M5×0.8	M5×0.8	Rc1/8	Rc1/4
	Monoblock type with fitting block, and PC board type with fitting block	M5×0.8	M5×0.8	For both ϕ6 and ϕ8	Rc1/4
	Monoblock type with single size fitting block, and PC board type with single size fitting block	M5×0.8	M5×0.8	ϕ6 or ϕ8	Rc1/4
	Split type with female thread block, and serial transmission type with female thread block	—	M5×0.8	Rc1/8	Rc1/4
	Split type with fitting block, and serial transmission type with fitting block	—	M5×0.8	For both ϕ6 and ϕ8	For both ϕ8 and ϕ10
	Split type with single size fitting block, and serial transmission type with single size fitting block	—	M5×0.8	ϕ6 or ϕ8	ϕ8, ϕ10

Effective Area〔Cv〕

●When used as a single unit

mm²

Basic model	Effective area〔Cv〕
F15T0□-A2 F15T1□-A2 F15T2□-A2 F15T3□-A2 F15T4□-A2 F15T5□-A2	9.5〔0.53〕
F15T0□-F3 F15T1□-F3 F15T2□-F3 F15T3□-F3 F15T4□-F3 F15T5□-F3	9.2〔0.51〕
F15T0□-F4□ F15T1□-F4□ F15T2□-F4□ F15T3□-F4□ F15T4□-F4□ F15T5□-F4□	9.5〔0.53〕

mm²

Basic model	Effective area〔Cv〕
F15T0□-F5□ F15T1□-F5□ F15T2□-F5□ F15T3□-F5□ F15T4□-F5□ F15T5□-F5□	8.0〔0.44〕
F15T0□-F6□ F15T1□-F6□ F15T2□-F6□ F15T3□-F6□ F15T4□-F6□ F15T5□-F6□	8.5〔0.47〕

●When mounted on a manifold

mm²

Valve Type \ Manifold model		F15M□F(FP)	F15M□A(AP)	F15M□N(P)(S)
F15T0□ F15T1□ F15T2□	Outlet port Fittings for both ϕ6 and ϕ8 Female thread	9.2〔0.51〕	8.5〔0.47〕	10.0〔0.56〕
F15T3□ F15T4□ F15T5□	Outlet port ϕ6 fitting	7.7〔0.43〕	7.2〔0.40〕	8.7〔0.48〕
	Outlet port ϕ8 fitting	8.2〔0.45〕	8.0〔0.44〕	9.7〔0.54〕

Caution: When the individual air supply spacer or the individual air exhaust spacer is used, effective area decreases by about 30%.

Mass

Single Valve Unit Mass

g [oz.]

F15T□□	F15T□□-A1	F15T□□-A2	F15T□□-FJ	F15T□□-FJ5	F15T□□-FJ6
Outlet section None	Outlet section With plate	Outlet section With plate	Outlet section With different size fitting block	Outlet section With ϕ6 fitting block	Outlet section With ϕ8 fitting block
Inlet section None	Inlet section None	Inlet section With A type sub-base	Inlet section None	Inlet section None	Inlet section None
87 [3.07]	106 [3.74]	216 [7.62]	117 [4.13]	123 [4.34]	133 [4.69]

g [oz.]

F15T□□-FM	F15T□□-F3	F15T□□-F4	F15T□□-F5	F15T□□-F6
Outlet section With female thread block	Outlet section With different size fitting block	Outlet section With female thread block	Outlet section With ϕ6 fitting block	Outlet section With ϕ8 fitting block
Inlet section None	Inlet section With female thread block	Inlet section With female thread block	Inlet section With female thread block	Inlet section With female thread block
108 [3.81]	132 [4.66]	123 [4.34]	138 [4.87]	148 [5.22]

Basic Type **F15T0** is 12g [0.42oz.] less than the mass shown above.

Monoblock Manifold Mass (single valve unit included)

g [oz.]

Monoblock manifold	Mass calculation of each unit			
	4(A), 2(B) ports outlet specifications			
	Female thread	Different size fitting block	ϕ6 fitting block	ϕ8 fitting block
A type	(224×n)+100 [(7.90×n)+3.53]	(234×n)+100 [(8.25×n)+3.53]	(240×n)+100 [(8.47×n)+3.53]	(250×n)+100 [(8.82×n)+3.53]
F type	(155×n)+105 [(5.47×n)+3.70]	(165×n)+105 [(5.82×n)+3.70]	(171×n)+105 [(6.03×n)+3.70]	(181×n)+105 [(6.38×n)+3.70]

Calculation example : **F15M8AM**
stn.1～stn.8 F15T1-A1-PS DC24V
(224×8)+100=1892g [66.74oz.]
When mounting a block-off plate, calculate the female thread specification at 90g [3.17oz.] less than the above calculation result per unit, while the different size fitting specifications are 100g [3.53oz.], ϕ6 fitting specification 106g [3.74oz.], and the ϕ8 fitting specification 116g [4.09oz.] less.
When mounting the **F15T0** specification, subtract 12g [0.42oz.] per unit from the above calculation result.

PC Board Manifold Mass (single valve unit included)

g [oz.]

PC board manifold	Mass calculation of each unit				
	4(A), 2(B) ports outlet specifications				Circuit board and connector section
	Female thread	Different size fitting block	ϕ6 fitting block	ϕ8 fitting block	
A type	(224×n)+100 [(7.90×n)+3.53]	(234×n)+100 [(8.25×n)+3.53]	(240×n)+100 [(8.47×n)+3.53]	(250×n)+100 [(8.82×n)+3.53]	(2×n)+15 [(0.07×n)+0.53]
F type	(155×n)+105 [(5.47×n)+3.70]	(165×n)+105 [(5.82×n)+3.70]	(171×n)+105 [(6.03×n)+3.70]	(181×n)+105 [(6.38×n)+3.70]	

Calculation example : **F15M8APM-F201-W**
stn.1～stn.8 F15T1-A1-PP DC24V
(224×8)+100+(2×8)+15=1923g [67.83oz.]
When mounting a block-off plate, calculate the female thread specification at 90g [3.17oz.] less than the above calculation result per unit, while the different size fitting specifications are 100g [3.53oz.], ϕ6 fitting specification 106g [3.74oz.], and the ϕ8 fitting specification 116g [4.09oz.] less.
When mounting the **F15T0** specification, subtract 12g [0.42oz.] per unit from the above calculation result.

Mass

Mass of Split Type Manifold and Serial Transmission Compatible Type

The split type manifold has the same mass regardless of the outlet locations, since the outlet type is the combination of the valve outlet and manifold outlet specifications. The mass can only be changed by the selection of the type of inlet/outlet block.

Mass of Split Manifold Non-Plug-in Type (single valve unit included)

g [oz.]

Non-plug-in type	Mass calculation of each unit			
	4(A), 2(B) ports outlet specifications			
	Female thread	Different size fitting block	φ6 fitting block	φ8 fitting block
	(166×n)+254 [(5.86×n)+8.96]	(176×n)+254 [(6.21×n)+8.96]	(182×n)+254 [(6.42×n)+8.96]	(192×n)+254 [(6.77×n)+8.96]

g [oz.]

Additional mass			
Piping block specification			
Female thread	Different size fitting block	φ8 fitting block	φ10 fitting block
150 [5.29]	160 [5.64]	185 [6.53]	194 [6.84]

Calculation example : **F15M8N-MR**
stn.1～stn.8 F15T1-A1-PS DC24V
(166×8)+254+150=1732g [61.09oz.]
When mounting a block-off plate, calculate the female thread specification at 90g [3.17oz.] less than the above calculation result per unit, while the different size fitting specifications are 100g [3.53oz.], φ6 fitting specification 106g [3.74oz.], and the φ8 fitting specification 116g [4.09oz.] less.
When mounting the **F15T0** specification, subtract 12g [0.42oz.] per unit from the above calculation result.

Mass of Split Manifold Plug-in Type/ Serial Transmission Compatible Type (single valve unit included)

g [oz.]

Plug-in type Serial transmission compatible type	Mass calculation of each unit			
	4(A), 2(B) ports outlet specifications			
	Female thread	Different size fitting block	φ6 fitting block	φ8 fitting block
	(168×n)+254 [(5.93×n)+8.96]	(176×n)+254 [(6.21×n)+8.96]	(182×n)+254 [(6.42×n)+8.96]	(192×n)+254 [(6.77×n)+8.96]

g [oz.]

Additional mass			
Piping block specification			
Female thread	Different size fitting block	φ8 fitting block	φ10 fitting block
150 [5.29]	160 [5.64]	185 [6.53]	194 [6.84]

g [oz.]

Additional mass			
Wiring block specification			
-F100, -F101	**-F200, -F201, -F260**	**-D250, -D251**	**-T200**
68 [2.40]	70 [2.47]	70 [2.47]	150 [5.29]

g [oz.]

Transmission block mass	
Serial transmission block[Note]	
YS□□	**YS391**
160 [5.64]	110 [3.88]

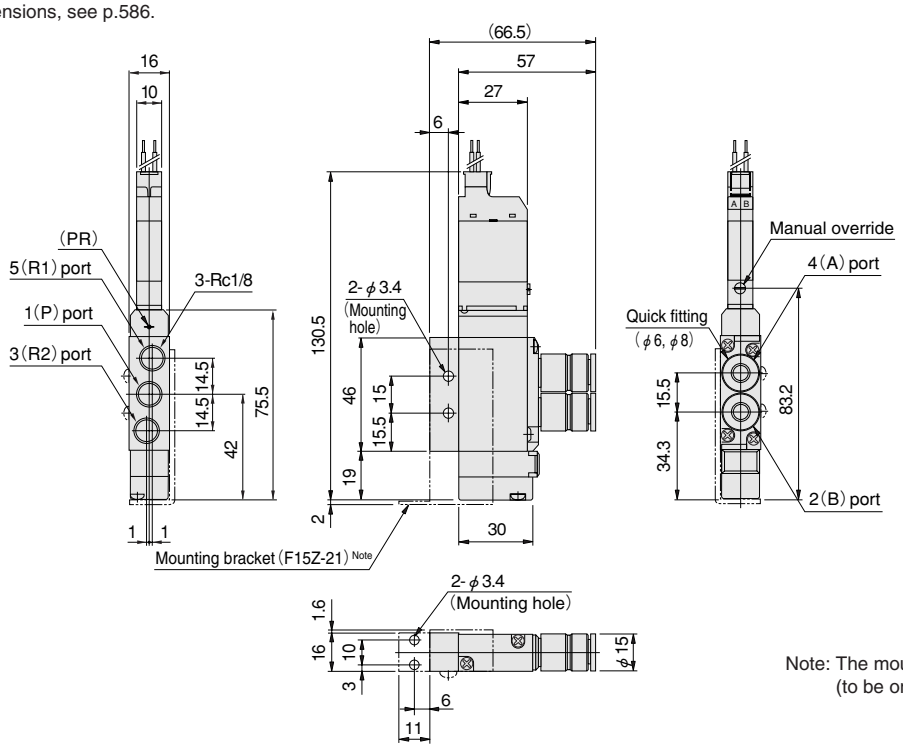
Calculation example : **F15M8PM-MR-F201 DC24V**
stn.1～stn.8 F15T1-A1 DC24V
(168×8)+254+150+70=1818g [64.13oz.]
When mounting a block-off plate, calculate the female thread specification at 90g [3.17oz.] less than the above calculation result per unit, while the different size fitting specifications are 100g [3.53oz.], φ6 fitting specification 106g [3.74oz.], and the φ8 fitting specification 116g [4.09oz.] less.
When mounting the **F15T0** specification, subtract 12g [0.42oz.] per unit from the above calculation result.
Note : For the serial transmission compatible manifold, add the wiring block **-F201**(70g [2.47oz.]) to the calculation.

F15T

F15T Valve specification -F3-PS

With an outlet port different size fitting block
With an inlet port female thread block
S type plug connector

※For T0 type dimensions, see p.586.

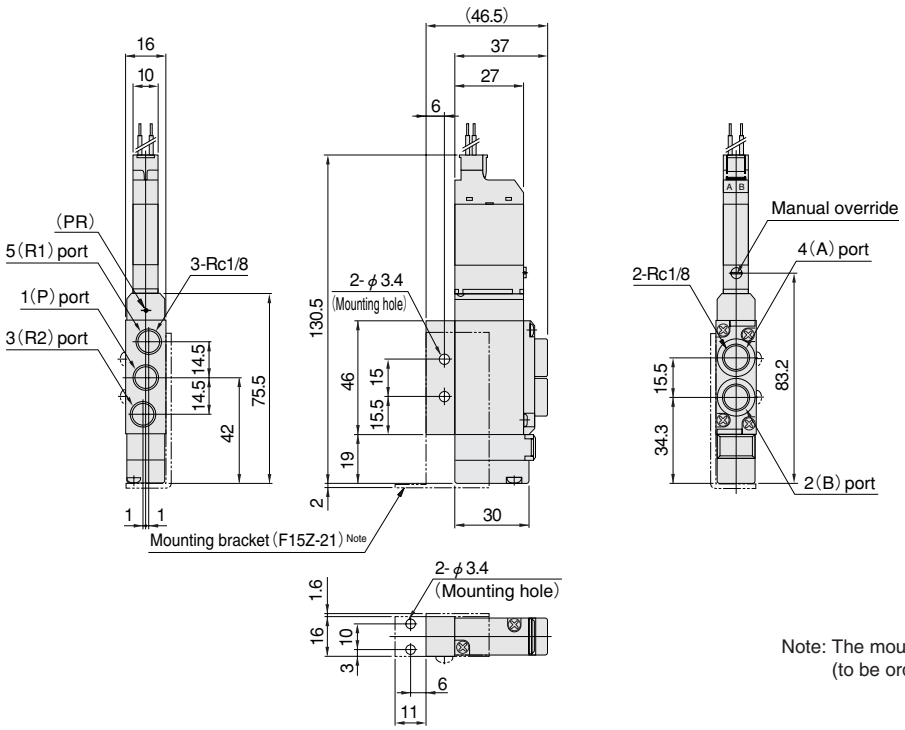


Note: The mounting bracket is an additional part (to be ordered separately).

F15T Valve specification -F4-PS

With an outlet port female thread block
With an inlet port female thread block
S type plug connector

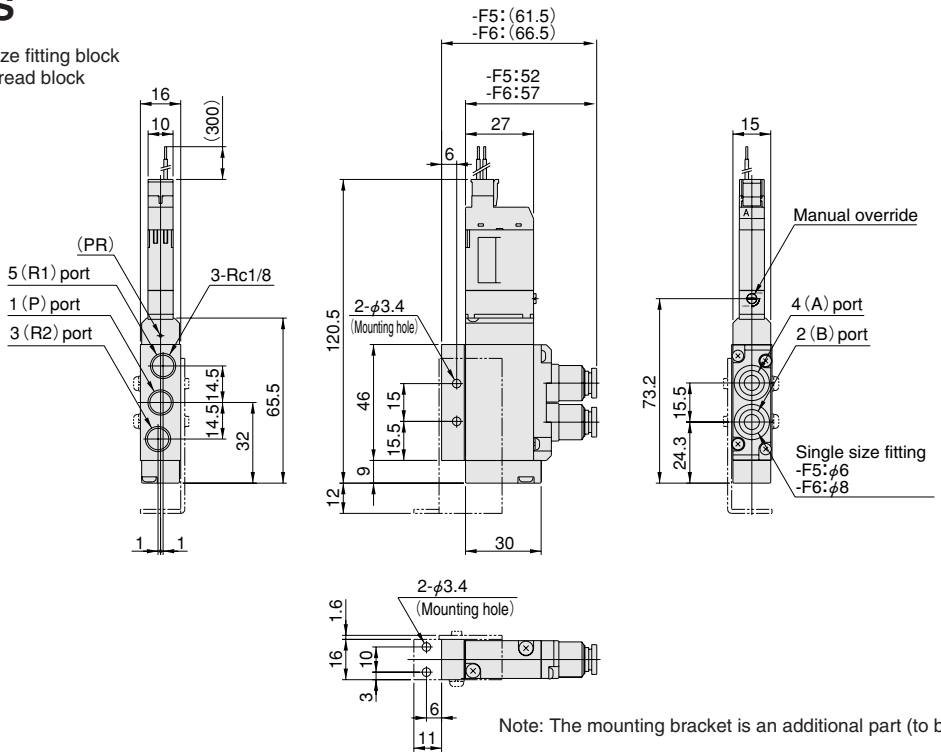
※For T0 type dimensions, see p.586.



Note: The mounting bracket is an additional part (to be ordered separately).

F15T0-F□-PS

With an outlet port single size fitting block
With an inlet port female thread block
S type plug connector

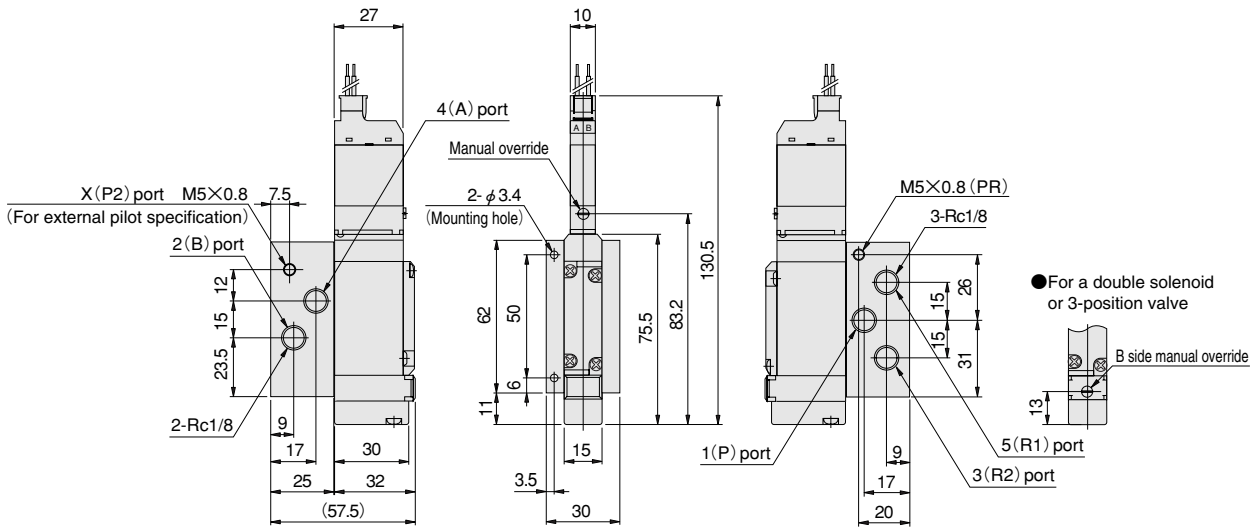


Note: The mounting bracket is an additional part (to be ordered separately).

F15T

F15T Valve specification Operation type -A2-PS

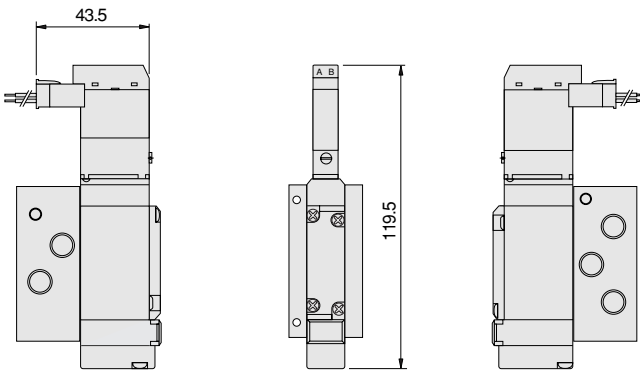
With an A type sub-base
S type plug connector



Note: The overall valve length of the T0 type is 10mm [0.394in.] shorter (the end cover protrusion is 10mm [0.394in.] shorter).

Option

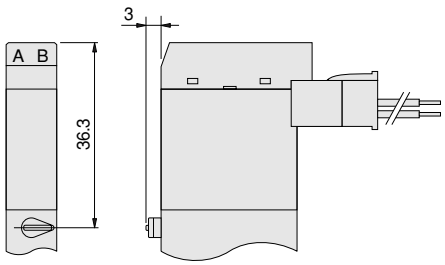
●L type plug connector : **-PL**



Note: The overall valve length of the T0 type is 10mm [0.394in.] shorter
(the end cover protrusion is 10mm [0.394in.] shorter).

Made to Order

●Manual override lever

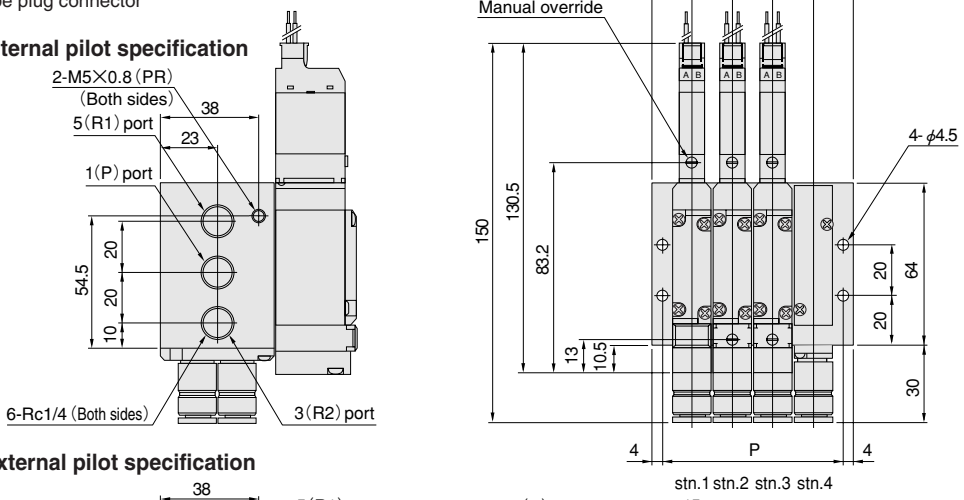


F15MA

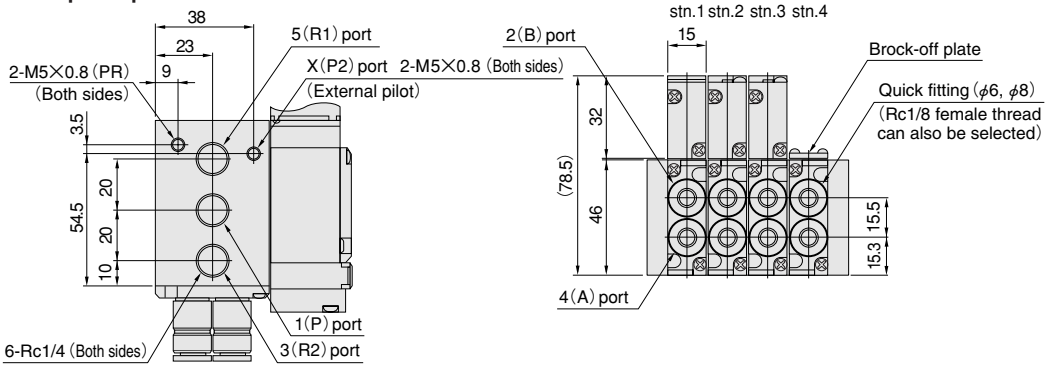
F15M Number of units A J/M Pilot specification (base piping type)

Monoblock manifold A type
Manifold with outlet port different size fitting blocks
S type plug connector

●Internal pilot specification



●External pilot specification

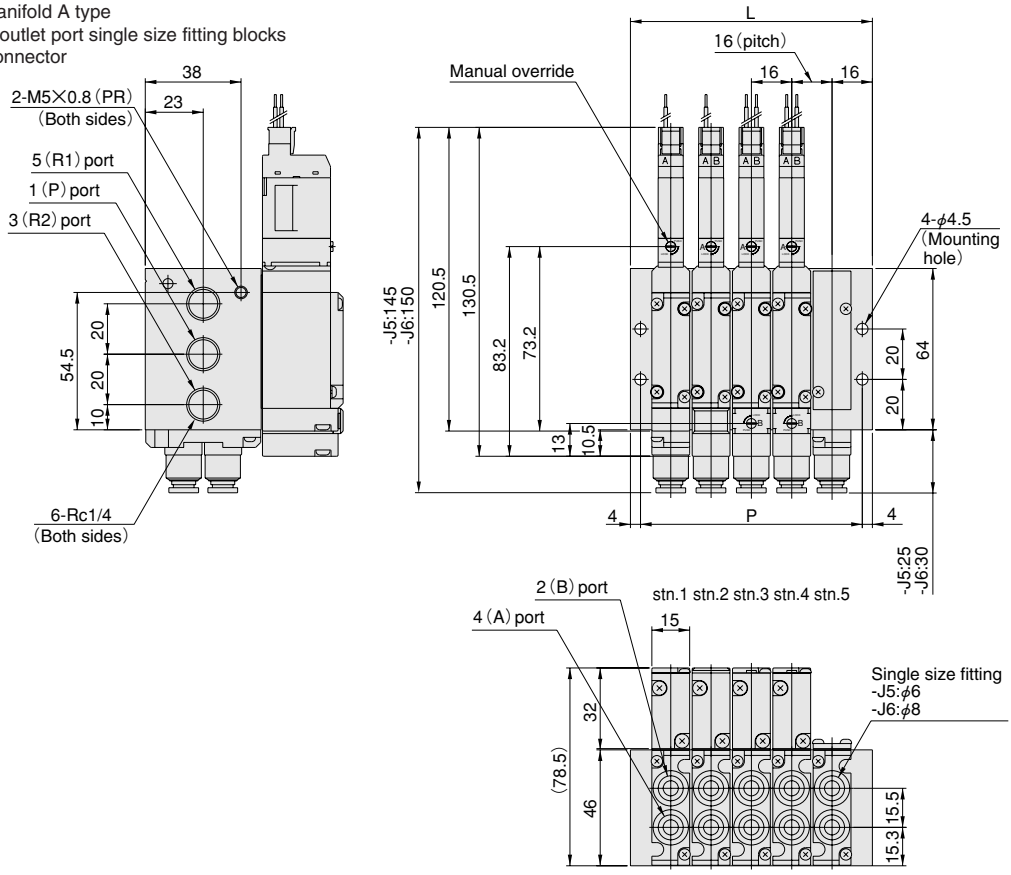


Unit dimensions

Number of units	L	P
2	48	40
3	64	56
4	80	72
5	96	88
6	112	104
7	128	120
8	144	136
9	160	152
10	176	168
11	192	184
12	208	200
13	224	216
14	240	232
15	256	248
16	272	264
17	288	280
18	304	296
19	320	312
20	336	328

F15M Number of units AL Pilot specification (base piping type)

Monoblock manifold A type
Manifold with outlet port single size fitting blocks
S type plug connector



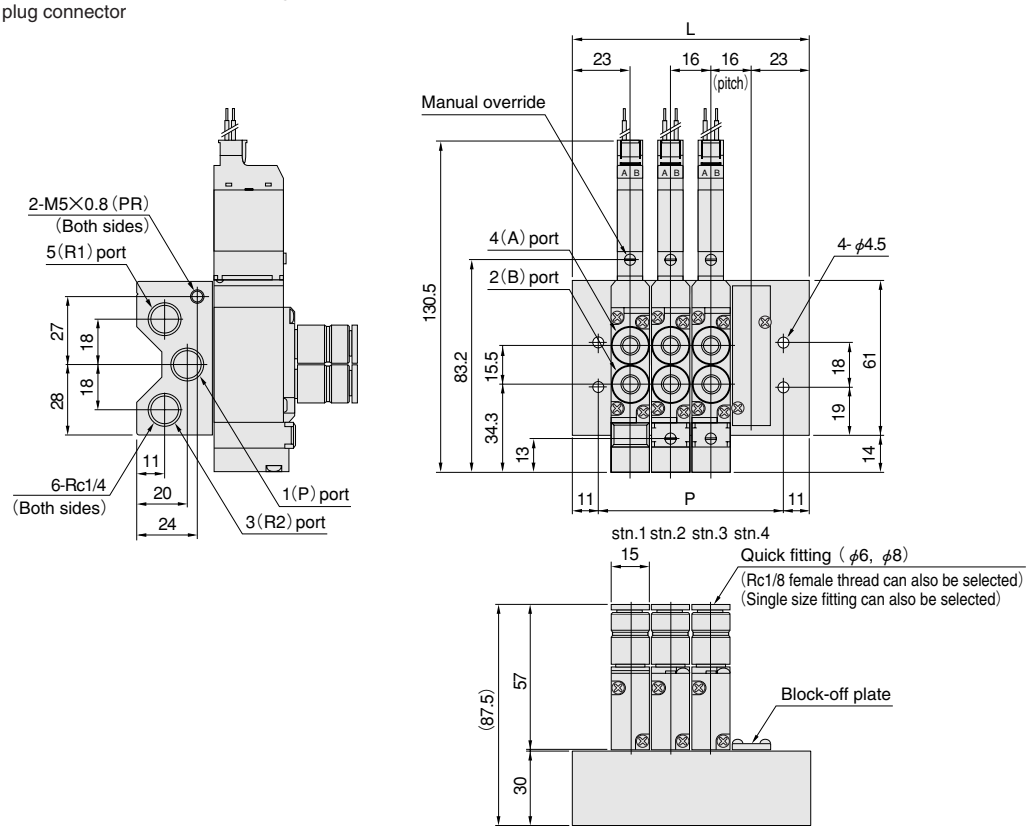
Unit dimensions

Number of units	L	P
2	48	40
3	64	56
4	80	72
5	96	88
6	112	104
7	128	120
8	144	136
9	160	152
10	176	168
11	192	184
12	208	200
13	224	216
14	240	232
15	256	248
16	272	264
17	288	280
18	304	296
19	320	312
20	336	328

F15M Number of units F (direct piping type)

CAD F15MF

Monoblock manifold F type
Valves with outlet port different size fitting blocks
S type plug connector



Unit dimensions

Number of units	L	P
2	62	40
3	78	56
4	94	72
5	110	88
6	126	104
7	142	120
8	158	136
9	174	152
10	190	168
11	206	184
12	222	200
13	238	216
14	254	232
15	270	248
16	286	264
17	302	280
18	318	296
19	334	312
20	350	328

Note: The overall valve length of the T0 type is 10mm [0.394in.] shorter (the end cover protrusion is 10mm [0.394in.] shorter).

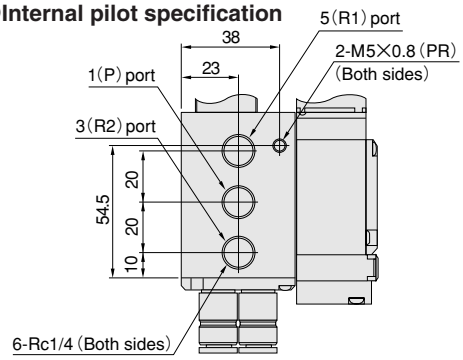
F15M [Number of units] AP [J/M] [Pilot specification] (base piping type)

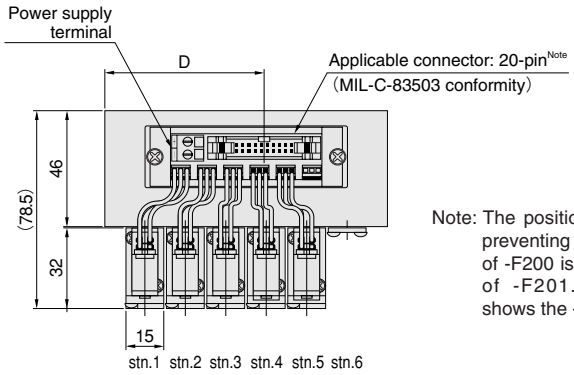
CAD F15MAPJ

PC board manifold A type
Manifold with outlet port different size fitting blocks

Note: The mounted valve example has a -W wiring connection specification.
In wiring connection specification -S, the mounted valves should be T0 or T1 type.

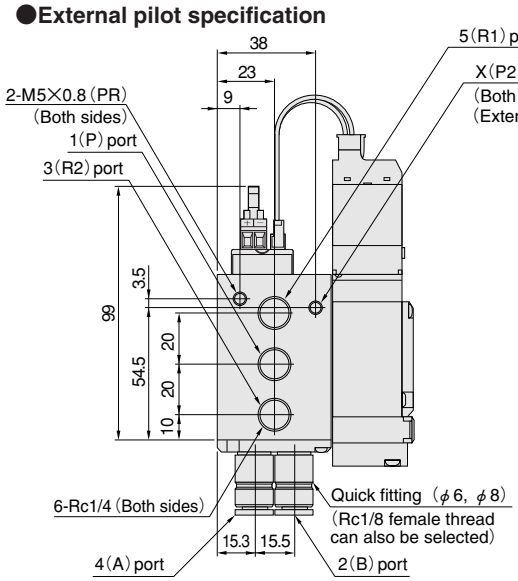
●Internal pilot specification

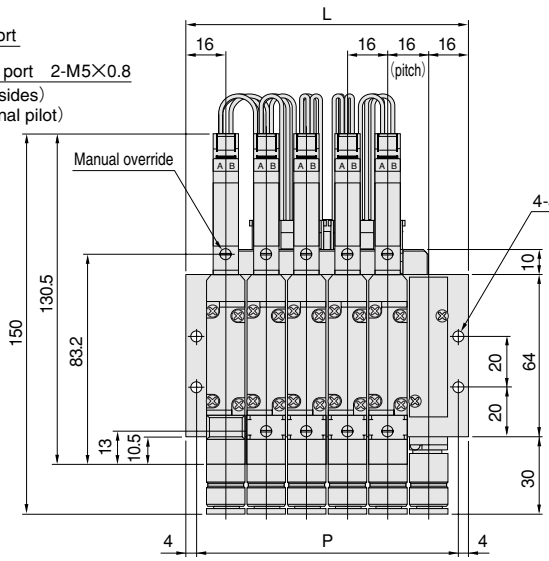




Note: The position of the groove preventing wrong insertions of -F200 is reversed to that of -F201. The drawing shows the -F201 case.

●External pilot specification





Unit dimensions

Number of units	L	P	D
6	112	104	63
8	144	136	68.5
10	176	168	68.5
12	208	200	79.5
14	240	232	90
16	272	264	90

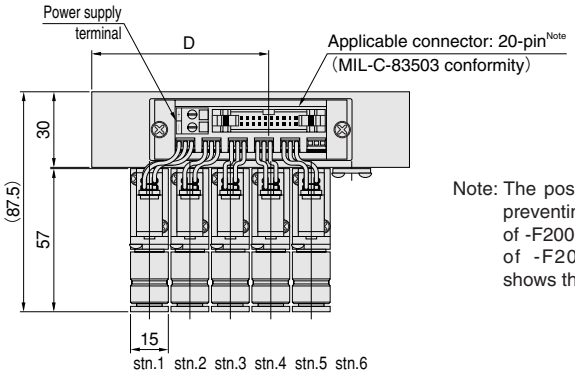
Note: Wiring connection specifications
For -S: 6, 8,10,12,14,16 units
For -W: 6, 8 units

F15M [Number of units] FP (direct piping type)

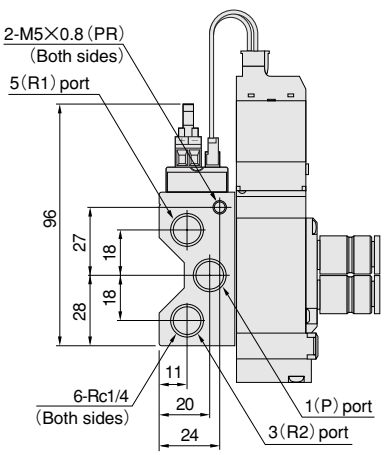
CAD F15MFP

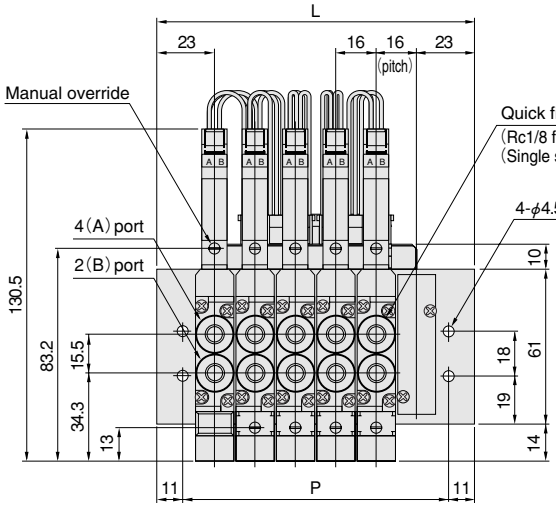
PC board manifold F type
Valves with outlet port different size fitting blocks

Note: The mounted valve example has a -W wiring connection specification.
For wiring connection specification -S, the mounted valves should be T0 or T1 type.



Note: The position of the groove preventing wrong insertions of -F200 is reversed to that of -F201. The drawing shows the -F201 case.





Unit dimensions

Number of units	L	P	D
6	126	104	70
8	158	136	75.5
10	190	168	75.5
12	222	200	86.5
14	254	232	92
16	286	264	92

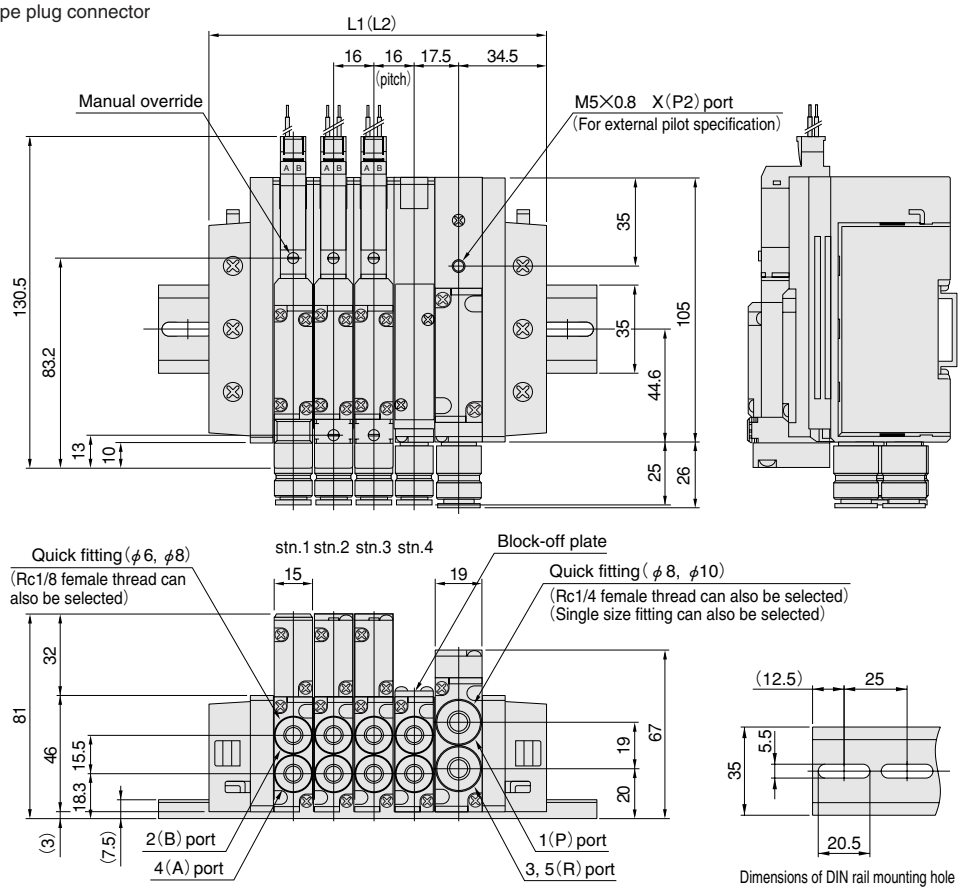
Note: Wiring connection specifications
For -S: 6, 8,10,12,14,16 units
For -W: 6, 8 units

Note: The overall valve length of the T0 type is 10mm [0.394in.] shorter (the end cover protrusion is 10mm [0.394in.] shorter).

F15M Number of units N J/M Pilot specification (base piping type)

CAD F15MNJ

Manifold with outlet port different size fitting blocks
S type plug connector



Unit dimensions

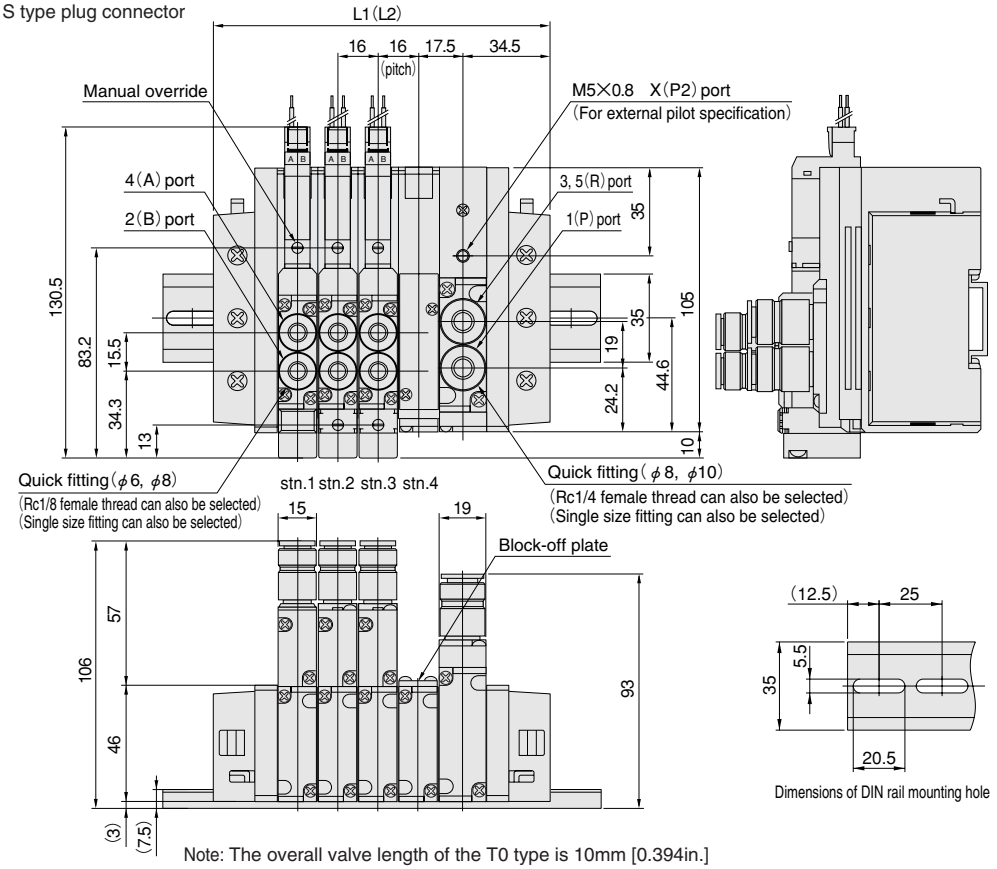
Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	101	150	120	150
3	117	150	136	175
4	133	175	152	200
5	149	175	168	200
6	165	200	184	225
7	181	225	200	250
8	197	225	216	250
9	213	250	232	275
10	229	275	248	275
11	245	275	264	300
12	261	300	280	325
13	277	325	296	325
14	293	325	312	350
15	309	350	328	375
16	325	375	344	375
17	341	375	360	400
18	357	400	376	425
19	373	400	392	425
20	389	425	408	450

Note: When using 2 piping blocks.

F15M Number of units N Pilot specification (direct piping type)

CAD F15MN

Valves with outlet port different size fitting blocks
S type plug connector



Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	101	150	120	150
3	117	150	136	175
4	133	175	152	200
5	149	175	168	200
6	165	200	184	225
7	181	225	200	250
8	197	225	216	250
9	213	250	232	275
10	229	275	248	275
11	245	275	264	300
12	261	300	280	325
13	277	325	296	325
14	293	325	312	350
15	309	350	328	375
16	325	375	344	375
17	341	375	360	400
18	357	400	376	425
19	373	400	392	425
20	389	425	408	450

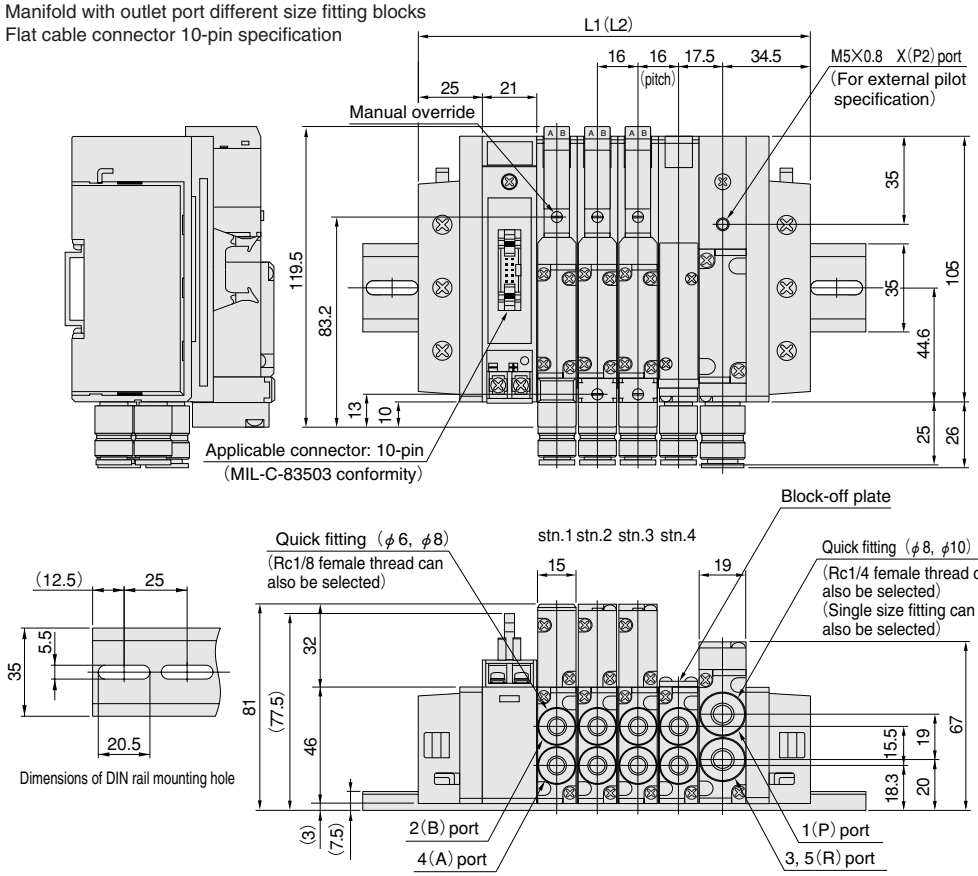
Note: When using 2 piping blocks.

Note: The overall valve length of the T0 type is 10mm [0.394in.] shorter (the end cover protrusion is 10mm [0.394in.] shorter).

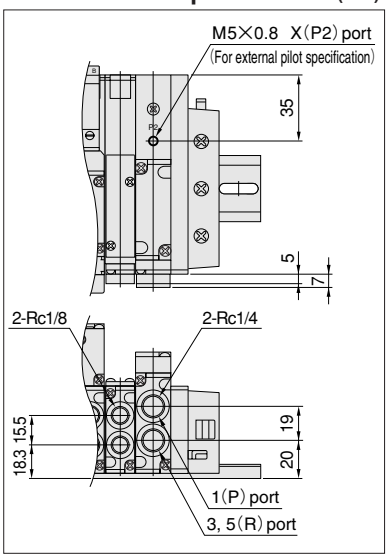
CAD Combination of F15MPJ and F15-CONT

F15M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
Flat cable connector 10-pin specification



Female thread specification (mm)



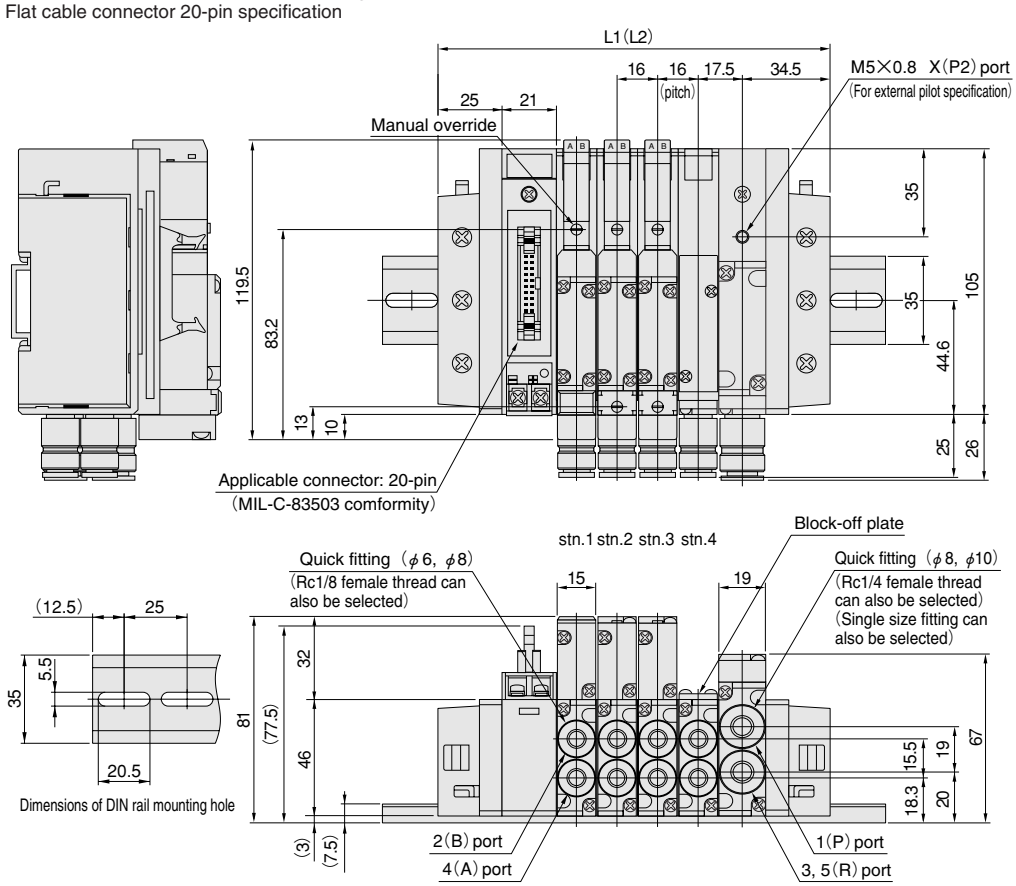
Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	122	150	141	175
3	138	175	157	200
4	154	200	173	200
5	170	200	189	225
6	186	225	205	250
7	202	250	221	250
8	218	250	237	275

Note: When using 2 piping blocks.

F15M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
Flat cable connector 20-pin specification



Unit dimensions

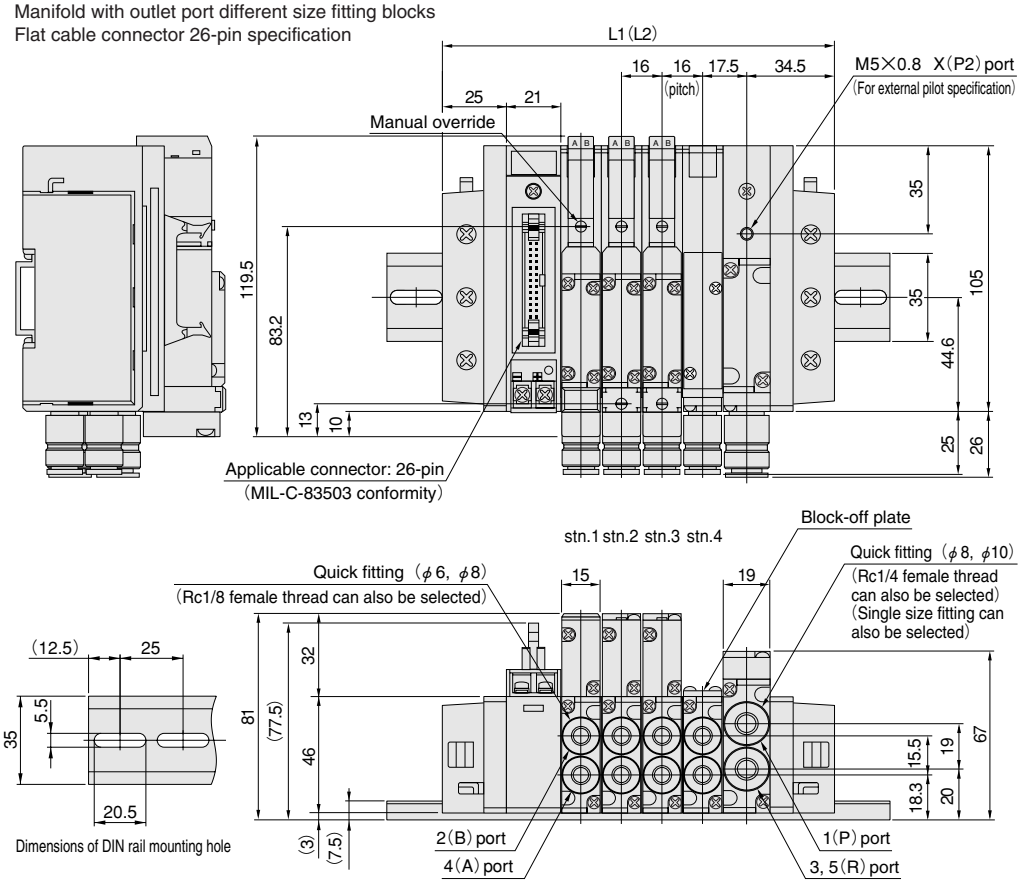
Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	122	150	141	175
3	138	175	157	200
4	154	200	173	200
5	170	200	189	225
6	186	225	205	250
7	202	250	221	250
8	218	250	237	275
9	234	275	253	300
10	250	300	269	300
11	266	300	285	325
12	282	325	301	350
13	298	325	317	350
14	314	350	333	375
15	330	375	349	375
16	346	375	365	400

Note: When using 2 piping blocks.

Combination of F15MPJ and F15-CONT

F15M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
Flat cable connector 26-pin specification



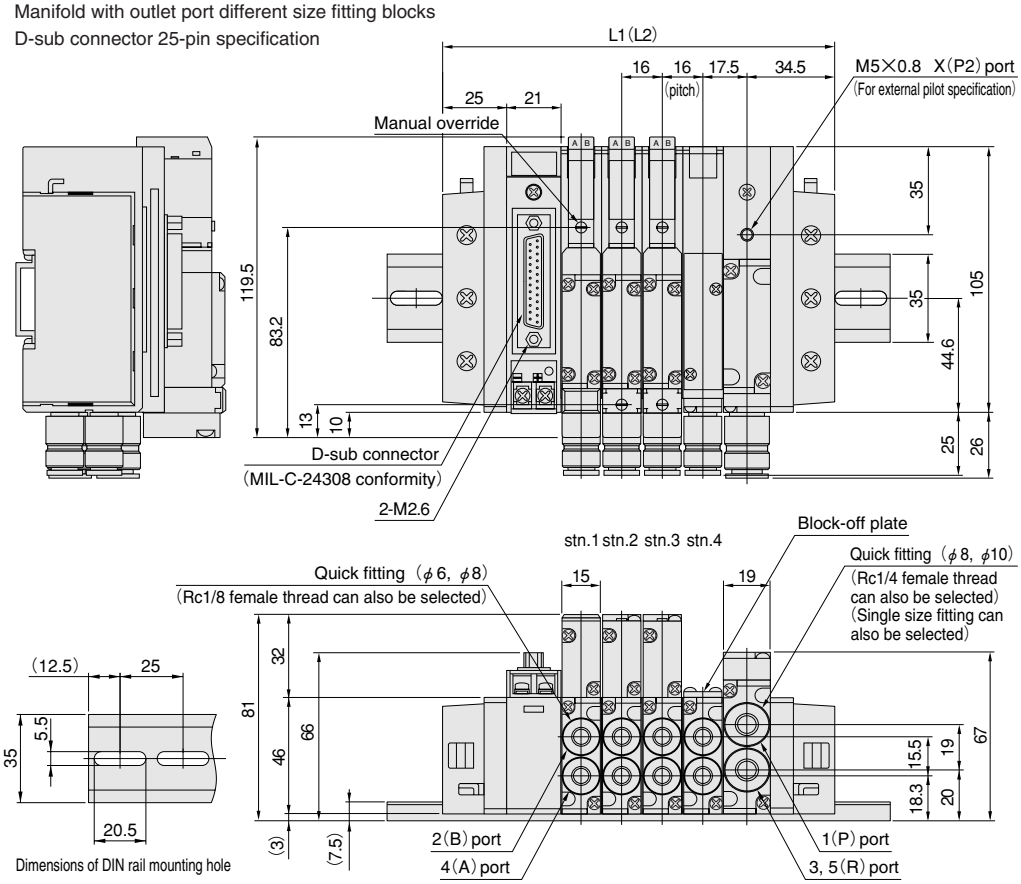
Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	122	150	141	175
3	138	175	157	200
4	154	200	173	200
5	170	200	189	225
6	186	225	205	250
7	202	250	221	250
8	218	250	237	275
9	234	275	253	300
10	250	300	269	300
11	266	300	285	325
12	282	325	301	350
13	298	325	317	350
14	314	350	333	375
15	330	375	349	375
16	346	375	365	400
17	362	400	381	425
18	378	425	397	425
19	394	425	413	450
20	410	450	429	475

Note: When using 2 piping blocks.

F15M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
D-sub connector 25-pin specification



Unit dimensions

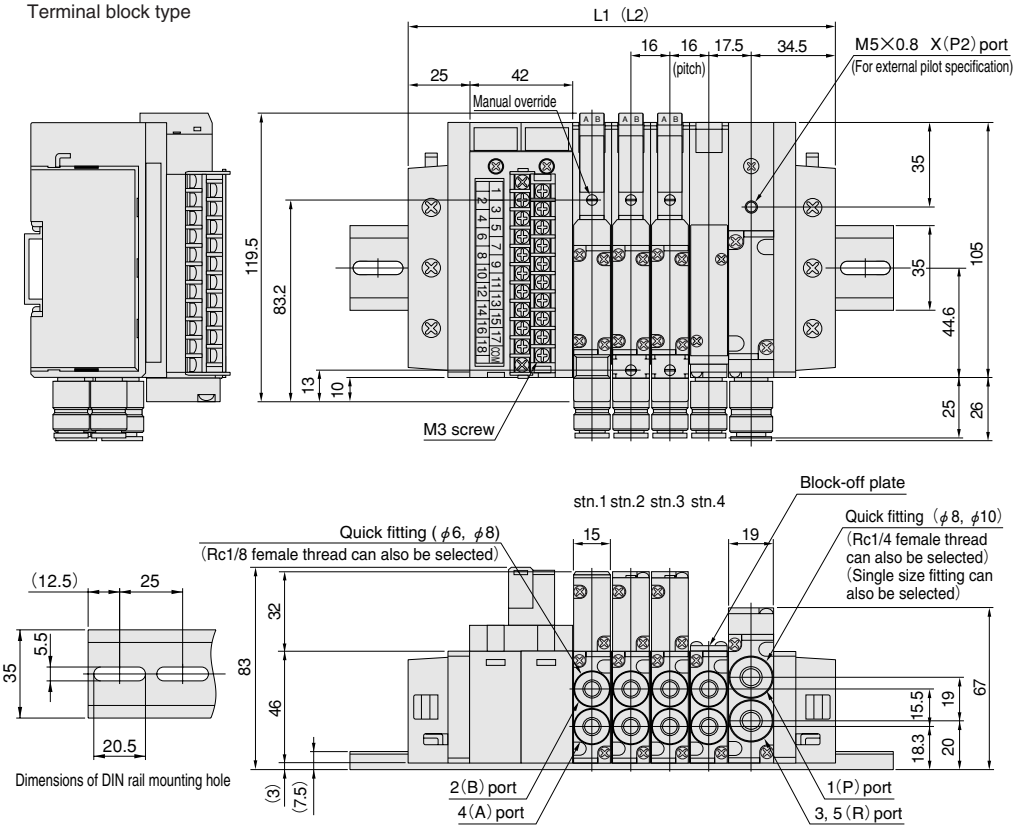
Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	122	150	141	175
3	138	175	157	200
4	154	200	173	200
5	170	200	189	225
6	186	225	205	250
7	202	250	221	250
8	218	250	237	275
9	234	275	253	300
10	250	300	269	300
11	266	300	285	325
12	282	325	301	350
13	298	325	317	350
14	314	350	333	375
15	330	375	349	375
16	346	375	365	400
17	362	400	381	425
18	378	425	397	425
19	394	425	413	450
20	410	450	429	475

Note: When using 2 piping blocks.

F15M Number of units P J/M Pilot specification (base piping type)

CAD Combination of F15MPJ and F15-CONT

Manifold with outlet port different size fitting blocks
Terminal block type



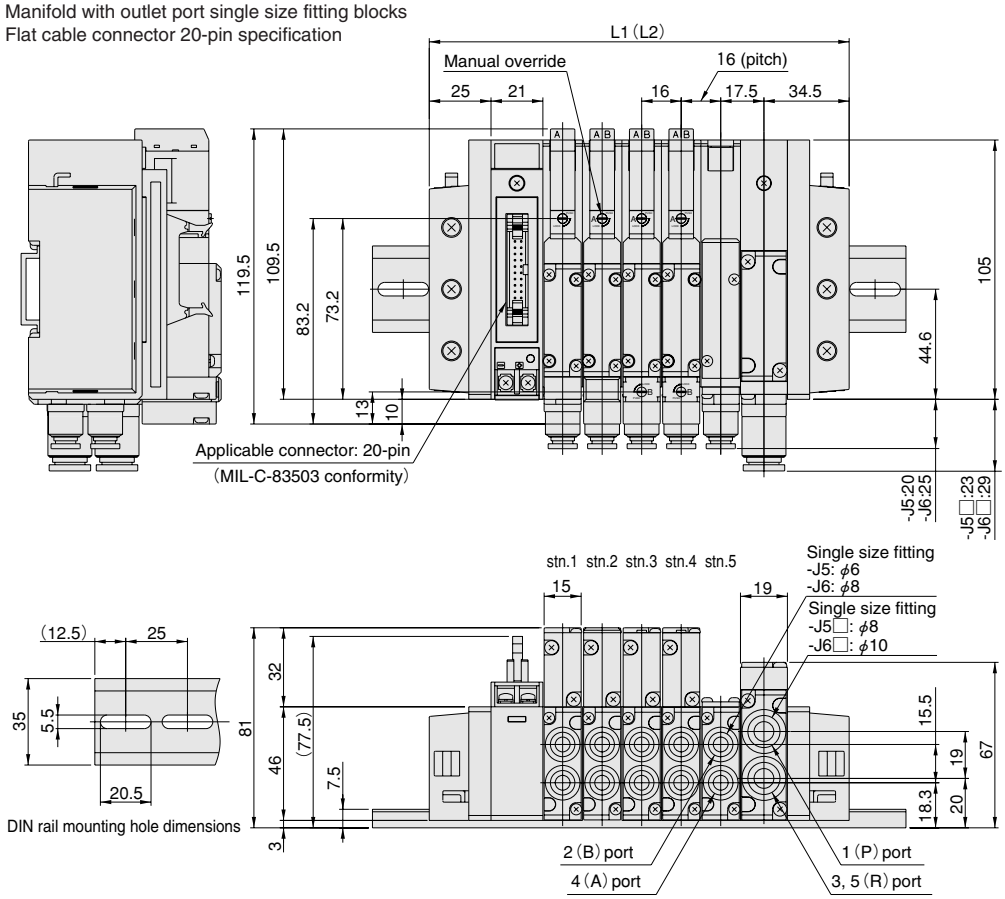
Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	143	175	162	200
3	159	200	178	225
4	175	225	194	225
5	191	225	210	250
6	207	250	226	275
7	223	250	242	275
8	239	275	258	300
9	255	300	274	300
10	271	300	290	325
11	287	325	306	350
12	303	350	322	350
13	319	350	338	375
14	335	375	354	400
15	351	400	370	400
16	367	400	386	425
17	383	425	402	450
18	399	425	418	450

Note: When using 2 piping blocks.

F15M Number of units PL Pilot specification (base piping type)

Manifold with outlet port single size fitting blocks
Flat cable connector 20-pin specification



Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	122	150	141	175
3	138	175	157	200
4	154	200	173	200
5	170	200	189	225
6	186	225	205	250
7	202	250	221	250
8	218	250	237	275
9	234	275	253	300
10	250	300	269	300
11	266	300	285	325
12	282	325	301	350
13	298	325	317	350
14	314	350	333	375
15	330	375	349	375
16	346	375	365	400

Note: When using 2 piping blocks.

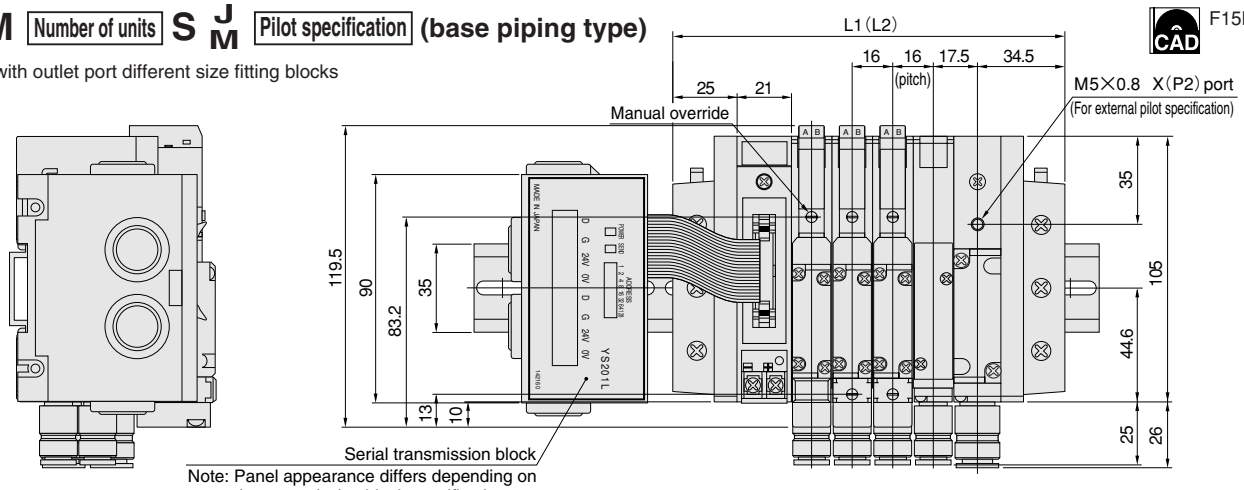
F15 Series Dimensions of Serial Transmission Compatible Manifold (mm)

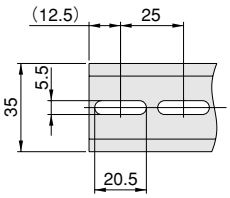
※For the dimensions of the manifold for the OMRON CompoBus/D, see p.596.

F15M Number of units S J/M Pilot specification (base piping type)

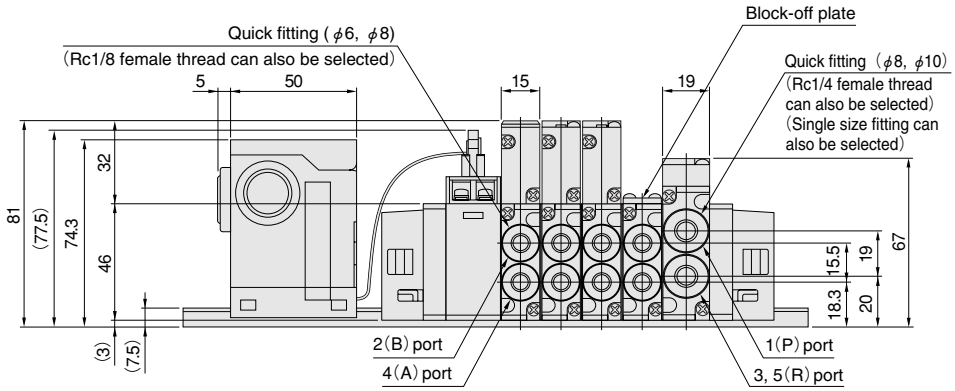
F15MSJ

Manifold with outlet port different size fitting blocks





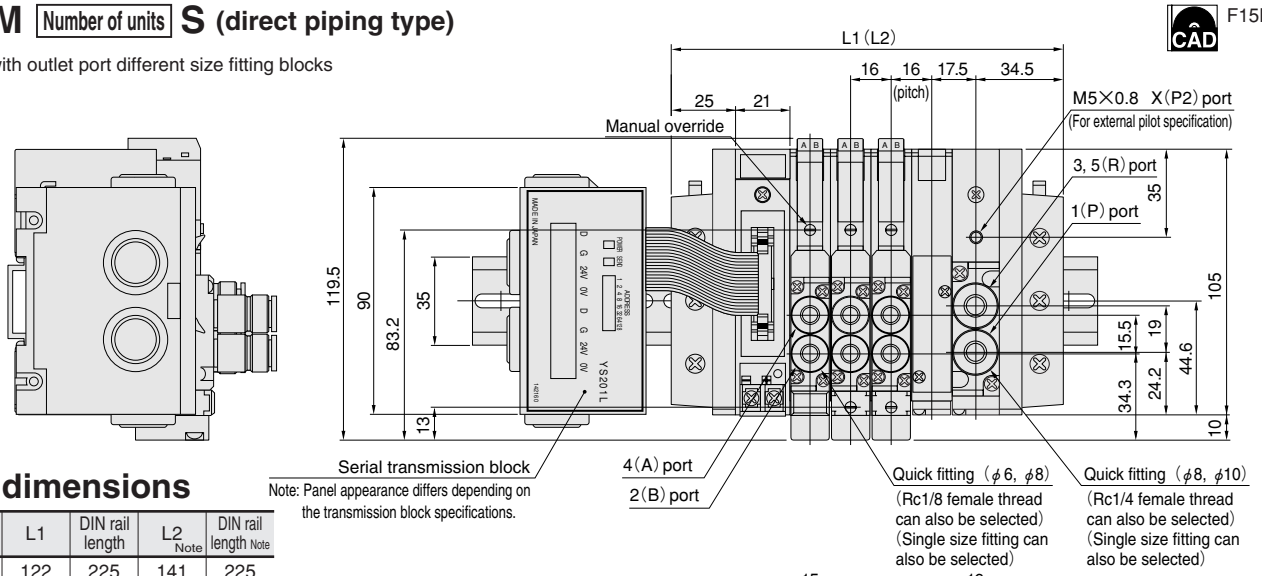
Dimensions of DIN rail mounting hole

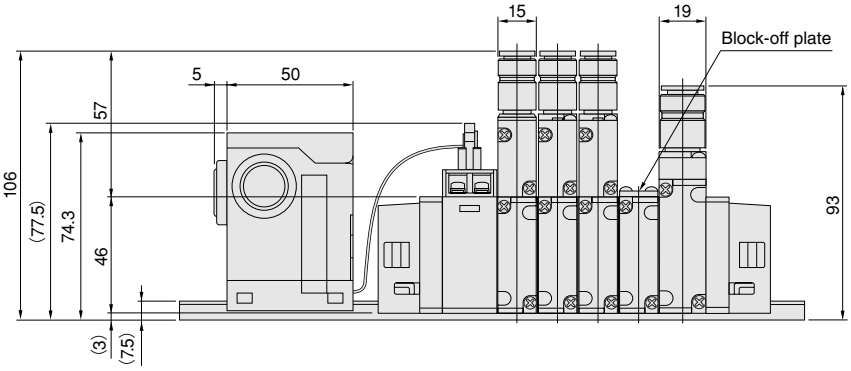


F15M Number of units S (direct piping type)

F15MS

Valves with outlet port different size fitting blocks





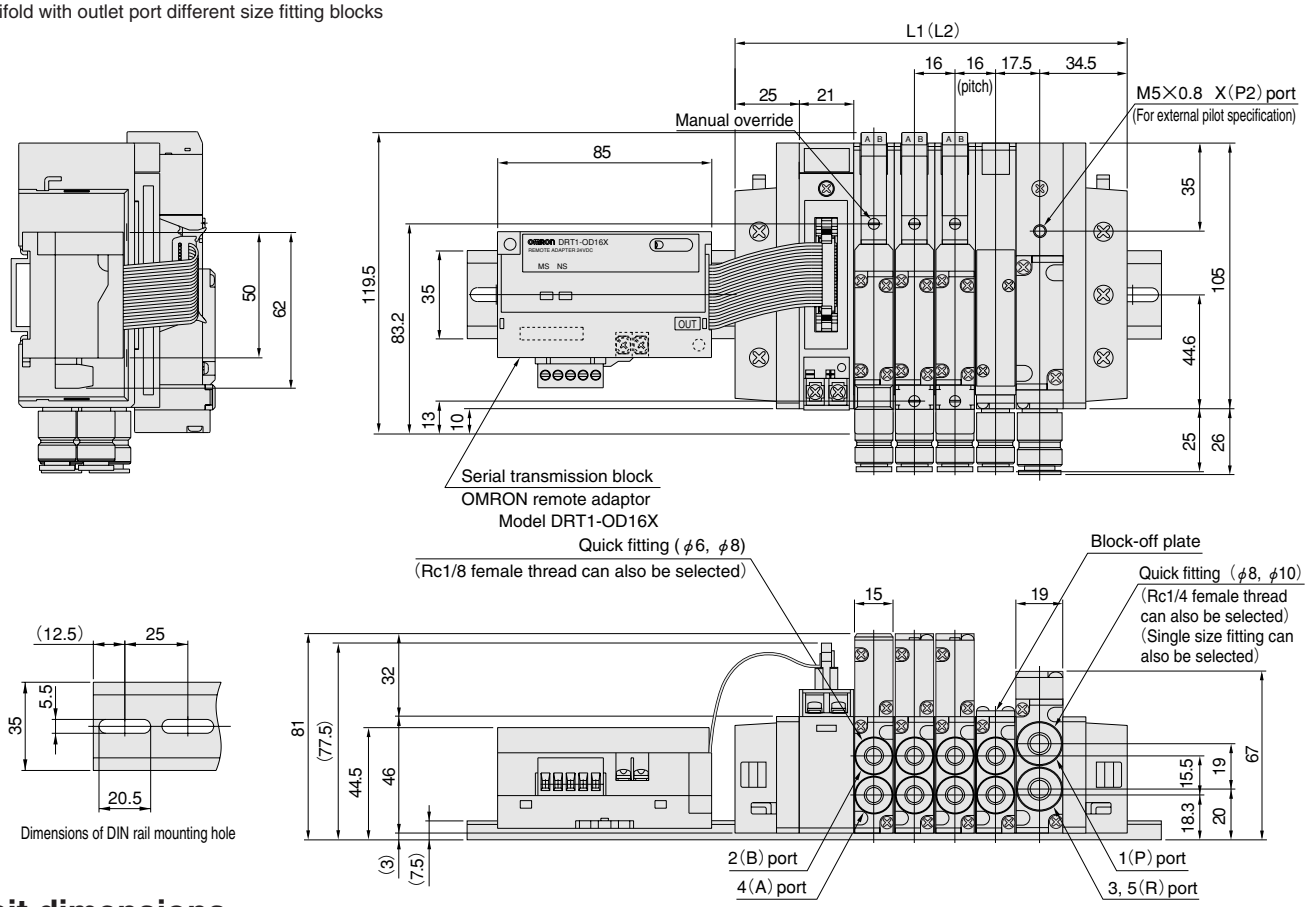
Unit dimensions

Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	122	225	141	225
3	138	225	157	250
4	154	250	173	275
5	170	275	189	275
6	186	275	205	300
7	202	300	221	325
8	218	300	237	325
9	234	325	253	350
10	250	350	269	375
11	266	350	285	375
12	282	375	301	400
13	298	400	317	400
14	314	400	333	425
15	330	425	349	450
16	346	450	365	450

Note: When using 2 piping blocks.

F15M [Number of units] S [J / M] [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks



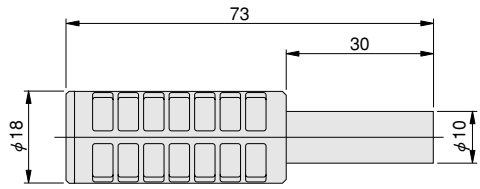
Unit dimensions

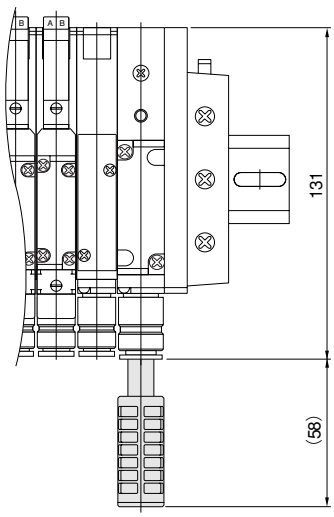
Number of units	L1	DIN rail length	L2 Note	DIN rail length Note
2	122	250	141	275
3	138	250	157	300
4	154	275	173	300
5	170	300	189	325
6	186	325	205	350
7	202	325	221	350
8	218	350	237	375
9	234	375	253	375
10	250	375	269	400
11	266	400	285	425
12	282	425	301	425
13	298	425	317	450
14	314	450	333	475
15	330	450	349	475
16	346	475	365	475

Note: When using 2 piping blocks.

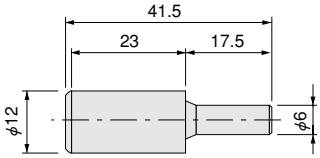
Additional Parts (To be ordered separately)

●Muffler: **KM-J10** [For both plug-in and non-plug-in types]

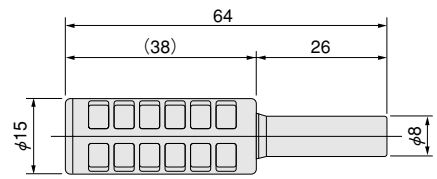




●Muffler: **KM-J6** [For Individual exhaust spacer only]

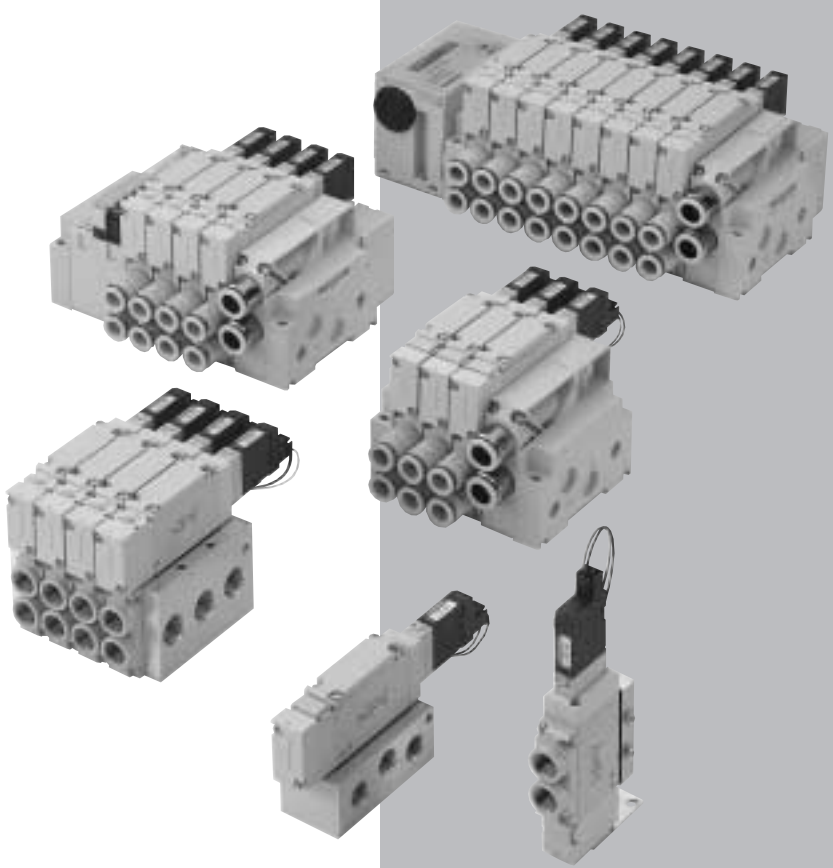


●Muffler: **KM-J8** [For Individual exhaust spacer only]



SOLENOID VALVES
F18 SERIES

INDEX



Specifications

Basic Models and Valve Functions

Item \ Basic model	F18T0	F18T1 F18T2	F18T3 F18T4 F18T5
Number of positions	2 positions		3 positions
Number of ports	5		
Valve function	Single solenoid only	Both single and double solenoid use	Closed center, Exhaust center, Pressure center

Remark: For the optional specifications and order codes, see p.525～552.

Specifications

Item \ Basic model		F18T0 F18T1 F18T2	F18T3 F18T4 F18T5	F18T0G F18T1G F18T2G	F18T3G F18T4G F18T5G	F18T0V F18T1V F18T2V	F18T3V
Media		Air					
Operation type		Internal pilot type		External pilot type (for positive pressure)		External pilot type (for vacuum)	
Effective area〔CV〕Note1 mm²		18〔1〕					
Port size Note2		Fitting for φ8 and φ10, Rc1/4		M5×0.8, fitting for φ8 and φ10, Rc1/4			
Lubrication		Not required					
Operating pressure range	Main valve	0.15～0.7MPa {1.5～7.1kgf/cm²} [22～102psi.]		0～0.7MPa {0～7.1kgf/cm²}Note3 [0～102psi.]		0.15MPa～−100kPa {1.5kgf/cm²～−750.1mmHg} [22psi.～−29.53in.Hg]	
	External pilot	——		0.2～0.7MPa {2～7.1kgf/cm²}Note3 [29～102psi.]		0.2～0.7MPa {2～7.1kgf/cm²} [29～102psi.]	
Proof pressure MPa {kgf/cm²} [psi.]		1.05 {10.7} [152]					
Response time Note4 ms	DC12V, DC24V	25/35 or below	15/70 or below	25/35 or below	15/70 or below	25/35 or below	15/70 or below
ON/OFF time ms	AC100V	25/35 or below	15/70 or below	25/35 or below	15/70 or below	25/35 or below	15/70 or below
Maximum operating frequency Hz		5					
Minimum time to energize for self holding Note5 ms		50	——	50	——	50	——
Operating temperature range (atmosphere and media) °C [°F]		5～50 [41～122]					
Shock resistance m/s² {G}		1373 {140.0} (Axial direction 294.2 {30.0})	294.2 {30.0}	1373 {140.0} (Axial direction 294.2 {30.0})	294.2 {30.0}	1373 {140.0} (Axial direction 294.2 {30.0})	294.2 {30.0}
Mounting direction		Any					

Notes: 1. For details, see the effective area on p.600.
2. For details, see the port size on p.600.
3. When the main valve pressure is 0.2～0.7MPa [29～102psi.], set the external pilot pressure to the main valve pressure or higher, and to 0.7MPa [102psi.] or less.
4. Values when air pressure is 0.5MPa [73psi.]. For switching phase timing, add a maximum of 5ms to the response time of the AC specification. The values for 2-position valves are when used as a single solenoid, and the values for 3-position valves are those when switching from the neutral position of closed center.
5. When used as a double solenoid valve. Excludes **T0**.

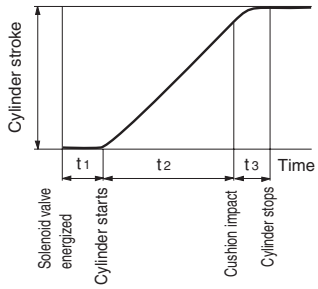
Solenoid Specifications

Item \ Rated voltage		DC12V	DC24V	AC100V	
Voltage range V		10.8～13.2 (12±10%)	21.6～26.4 (24±10%)	90～110 (100±10%)	
Rated frequency Hz		——	——	50	60
Current mA (r.m.s)	Starting	——	——	10Note 1	10Note 1
(when rated voltage is applied)	Energizing	76	38	10Note 1	10Note 1
Power consumption W		0.9	0.9	1.0VA	
Allowable leakage current mA		4.0	2.0	2.0	
Type of insulation		Type B			
Insulation resistance Note 2 MΩ		Over 100			
Color of LED indicator Note3		14(SA)：Red, 12(SB)：Green	14(SA)：Red, 12(SB)：Green	14(SA)：Red, 12(SB)：Green	
Surge suppression (as standard)		Flywheel diode		Bridge diode	

Notes: 1. Since the AC types have built-in bridge diodes, the starting current and energizing current value are virtually the same.
2. Value at DC500V megger.
3. The color of the **T0** indicator is red only.

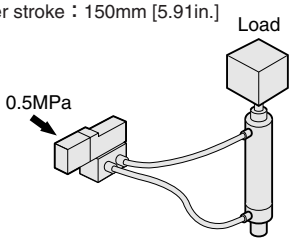
Cylinder Operating Speed

How to obtain cylinder speed

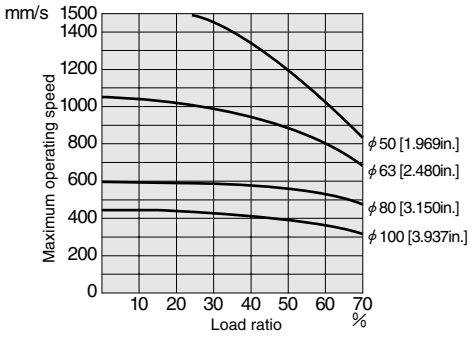


Measuring conditions

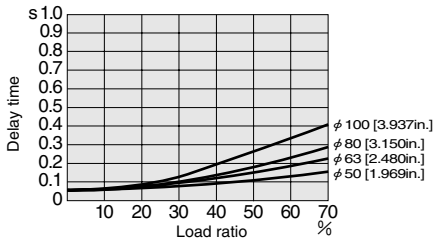
- Air pressure : 0.5MPa {5.1kgf/cm²} [73psi.]
- Piping (outer diameter × inner diameter × length) : φ10 × φ7.5 × 1000mm [39in.]
- Fitting : Quick fitting TS10-02
- Load ratio = $\frac{\text{Load}}{\text{Cylinder theoretical thrust}}$ (%)
- Cylinder stroke : 150mm [5.91in.]



Maximum operating speed

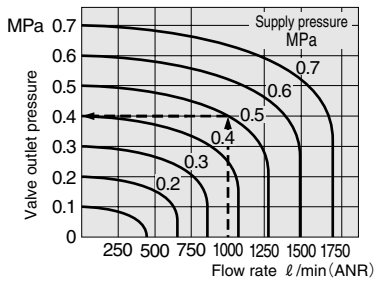


Delay time



Note:Delay time may vary according to the cylinder stroke.

Flow Rate



How to read the graph

When the supply pressure is 0.5MPa [73psi.] and flow rate is 1000 ℓ/min [35.3ft³/min.] (ANR), the valve outlet pressure becomes 0.4MPa [58psi.].

1mm/s = 0.0394in./sec.
1MPa = 145psi.
1 ℓ/min = 0.0353 ℓ/min.

Port Size

●F18 Series

Description/Piping specification		PR	X(P2)	4(A), 2(B)	1(P), 3(R2), 5(R1), 3, 5(R)
With sub-base		M5×0.8	M5×0.8	Rc1/4	Rc1/4
Single unit	With female thread block	—	—	Rc1/4	Rc1/4
	With dual-use different size fitting block	—	—	For both φ8 and φ10	Rc1/4
	With single size fitting block	—	—	φ8 or φ10	Rc1/4
Manifold	Monoblock type with female thread block	M5×0.8	M5×0.8	Rc1/4	Rc3/8
	Monoblock type with fitting block	M5×0.8	M5×0.8	For both φ8 and φ10	Rc3/8
	Monoblock type with single size fitting block	M5×0.8	M5×0.8	φ8 or φ10	Rc3/8
	Split type with female thread block, and serial transmission type with female thread block	—	M5×0.8	Rc1/4	Rc3/8 φ12
	Split type with fitting block, and serial transmission type with fitting block	—	M5×0.8	For both φ8 and φ10	
	Split type with single size fitting block, and serial transmission type with single size fitting block	—	M5×0.8	φ8 or φ10	

Effective Area〔Cv〕

●When used as a single unit

mm²

Basic model	Effective area〔Cv〕
F18T0□-A2 F18T1□-A2 F18T2□-A2 F18T3□-A2 F18T4□-A2 F18T5□-A2	17.3〔0.96〕
F18T0□-F3 F18T1□-F3 F18T2□-F3 F18T3□-F3 F18T4□-F3 F18T5□-F3	17.0〔0.94〕
F18T0□-F4 F18T1□-F4 F18T2□-F4 F18T3□-F4 F18T4□-F4 F18T5□-F4	17.3〔0.96〕

mm²

Basic model	Effective area〔Cv〕
F18T0□-F5 F18T1□-F5 F18T2□-F5 F18T3□-F5 F18T4□-F5 F18T5□-F5	15.0〔0.83〕
F18T0□-F6 F18T1□-F6 F18T2□-F6 F18T3□-F6 F18T4□-F6 F18T5□-F6	16.5〔0.91〕

●When mounted on a manifold

mm²

Valve type \ Manifold model		F18M□F	F18M□A	F18M□N(P)(S)
F18T0□ F18T1□ F18T2□ F18T3□ F18T4□ F18T5□	Outlet port Fittings for both φ8 and φ10, Female thread	17.0〔0.94〕	16.0〔0.89〕	18.0〔1〕
	Outlet port φ8 fitting	15.0〔0.83〕	14.7〔0.82〕	16.7〔0.93〕
	Outlet port φ10 fitting	16.5〔0.91〕	15.0〔0.83〕	17.0〔0.94〕

Caution: When the individual air supply spacer or the individual air exhaust spacer is used, effective area decreases by about 30%.

Mass

Single Valve Unit Mass

g [oz.]

F18T□□	F18T□□-A1	F18T□□-A2	F18T□□-FJ	F18T□□-FJ5	F18T□□-FJ6
Outlet section None	Outlet section With plate	Outlet section With plate	Outlet section With different size fitting block	Outlet section With ϕ8 fitting block	Outlet section With ϕ10 fitting block
Inlet section None	Inlet section None	Inlet section With A type sub-base	Inlet section None	Inlet section None	Inlet section None
118 [4.16]	144 [5.08]	308 [10.86]	159 [5.61]	184 [6.49]	193 [6.81]

g [oz.]

F18T□□-FM	F18T□□-F3	F18T□□-F4	F18T□□-F5	F18T□□-F6
Outlet section With female thread block	Outlet section With different size fitting block	Outlet section With female thread block	Outlet section With ϕ8 fitting block	Outlet section With ϕ10 fitting block
Inlet section None	Inlet section With female thread block	Inlet section With female thread block	Inlet section With female thread block	Inlet section With female thread block
147 [5.19]	184 [6.49]	172 [6.07]	209 [7.37]	218 [7.69]

Basic Type **F18T0** is 15g [0.53oz.] less than the mass shown above.

Monoblock Manifold Mass (single valve unit included)

g [oz.]

Monoblock manifold	Mass calculation of each unit			
	4(A), 2(B) ports outlet specifications			
	Female thread	Different size fitting block	ϕ8 fitting block	ϕ10 fitting block
A type	(334×n)+165 [(11.78×n)+5.82]	(344×n)+165 [(12.13×n)+5.82]	(369×n)+165 [(13.02×n)+5.82]	(378×n)+165 [(13.33×n)+5.82]
F type	(222×n)+70 [(7.83×n)+2.47]	(232×n)+70 [(8.18×n)+2.47]	(257×n)+70 [(9.07×n)+2.47]	(266×n)+70 [(9.38×n)+2.47]

Calculation example : **F18M8AM**
stn.1～stn.8 F18T1-A1-PS DC24V
(334×8)+165=2837g [100.07oz.]
When mounting a block-off plate, calculate the female thread specification at 110g [3.88oz.] less than the above calculation result per unit, while the different size fitting specifications are 120g [4.23oz.], the ϕ8 fitting specification 145g [5.11oz.], and the ϕ10 fitting specification 154g [5.43oz.] less.
When mounting the **F18T0** specification, subtract 15g [0.53oz.] per unit from the above calculation result.

Mass of Split Type Manifold and Serial Transmission Compatible Type

The split type manifold has the same mass regardless of the outlet location, since the outlet type is the combination of the valve outlet and manifold outlet specifications. The mass can only be changed by the selection of the type of inlet/outlet block.

Mass of Split Manifold Non-Plug-in Type (single valve unit included)

g [oz.]

Non-plug-in type	Mass calculation of each unit			
	4(A), 2(B) ports outlet specifications			
	Female thread	Different size fitting block	ϕ8 fitting block	ϕ10 fitting block
	(241×n)+234 [(8.50×n)+8.25]	(251×n)+234 [(8.85×n)+8.25]	(276×n)+234 [(9.74×n)+8.25]	(285×n)+234 [(10.05×n)+8.25]

g [oz.]

Additional mass	
Piping block specification	
Female thread	Fitting block
164 [5.78]	189 [6.67]

Calculation example : **F18M8N-MR**
stn.1～stn.8 F18T1-A1-PS DC24V
(241×8)+234+164=2326g [82.05oz.]
When mounting a block-off plate, calculate the female thread specification at 110g [3.88oz.] less than the above calculation result per unit, while the different size fitting specifications are 120g [4.23oz.], the ϕ8 fitting specification 145g [5.11oz.], and the ϕ10 fitting specification 154g [5.43oz.] less.
When mounting the **F18T0** specification, subtract 15g [0.53oz.] per unit from the above calculation result.

Mass

Mass of Split Manifold Plug-in Type/ Serial Transmission Compatible Type (single valve unit included)

g [oz.]

Plug-in type Serial transmission compatible type	Mass calculation of each unit			
	4(A), 2(B) ports outlet specifications			
	Female thread	Different size fitting block	ϕ6 fitting block	ϕ8 fitting block
	(243×n)+238 [(8.57×n)+8.40]	(253×n)+238 [(8.92×n)+8.40]	(278×n)+238 [(9.81×n)+8.40]	(287×n)+238 [(10.12×n)+8.40]

g [oz.]

Additional mass	
Piping block specification	
Female thread	Fitting block
174 [6.14]	199 [7.02]

g [oz.]

Additional mass			
Wiring block specification			
-F100, -F101	**-F200, -F201, -F260**	**-D250, -D251**	**-T200**
69 [2.43]	71 [2.50]	72 [2.54]	154 [5.43]

g [oz.]

Transmission block mass	
Serial transmission block[Note]	
YS□□	**YS391**
160 [5.64]	110 [3.88]

Calculation example : **F18M8PM-MR-F201 DC24V**
stn.1～stn.8 F18T1-A1 DC24V
(243×8)+238+174+71=2427g [85.61oz.]
When mounting a block-off plate, calculate the female thread specification at 110g [3.88oz.] less than the above calculation result per unit, while the different size fitting specifications are 120g [4.23oz.], the ϕ8 fitting specification 145g [5.11oz.], and the ϕ10 fitting specification 154g [5.43oz.] less.
When mounting the **F18T0** specification, subtract 15g [0.53oz.] per unit from the above calculation result.

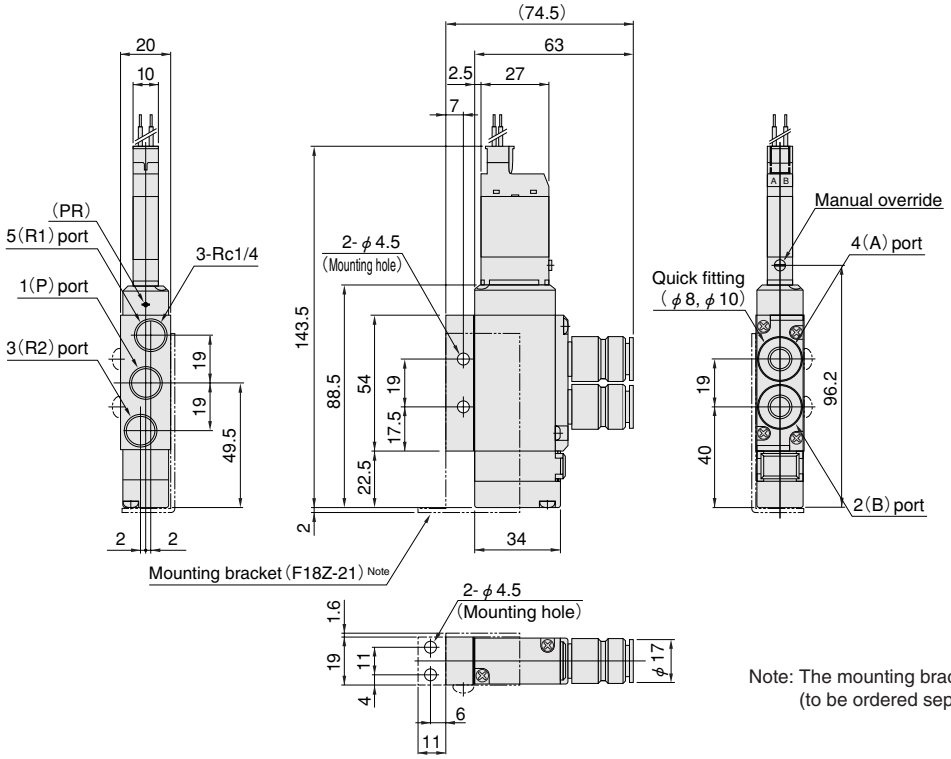
Note : When using the transmission block **YS391** for the serial transmission compatible manifold, add the wiring block **-F201** (71g [2.50oz.]) to the calculation.

F18T

F18T Valve specification -F3-PS

With an outlet port different size fitting block
With an inlet port female thread block
S type plug connector

※For T0 type dimensions, see p.604.

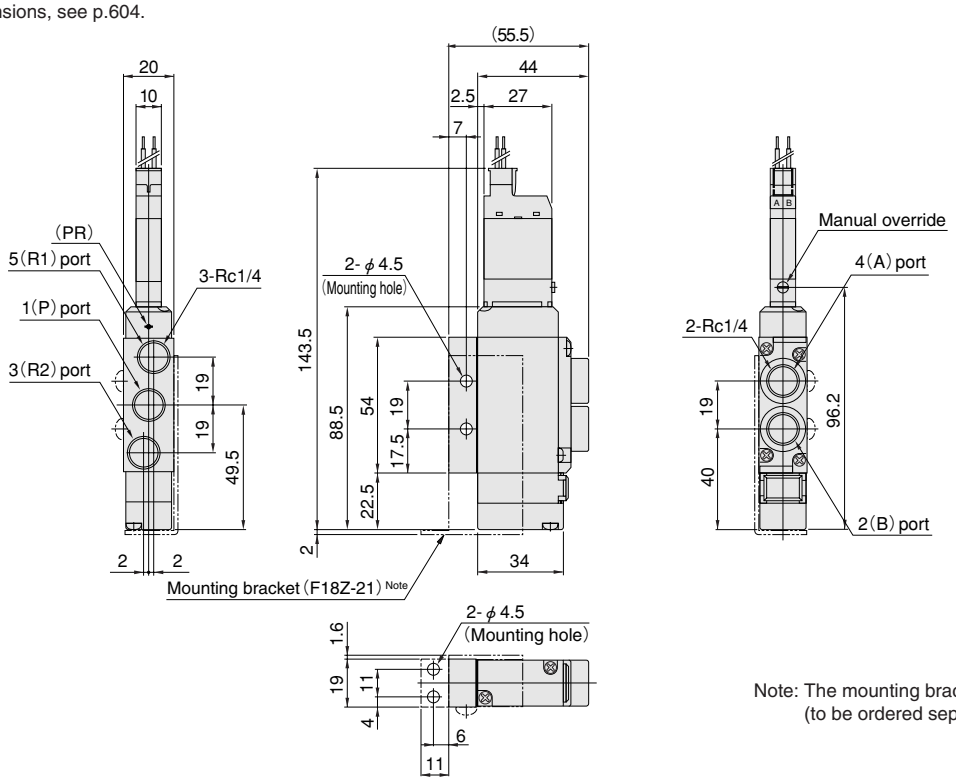


Note: The mounting bracket is an additional part (to be ordered separately).

F18T Valve specification -F4-PS

With an outlet port female thread block
With an inlet port female thread block
S type plug connector

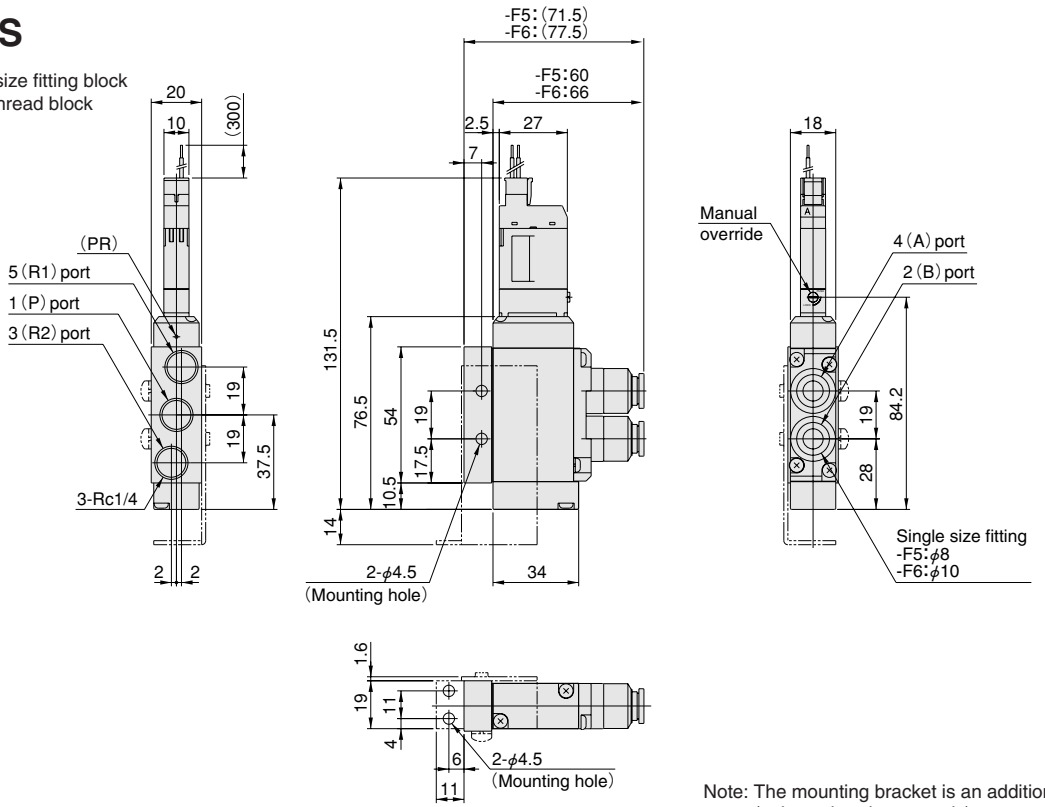
※For T0 type dimensions, see p.604.



Note: The mounting bracket is an additional part (to be ordered separately).

F18T0-F□-PS

With an outlet port single size fitting block
With an inlet port female thread block
S type plug connector

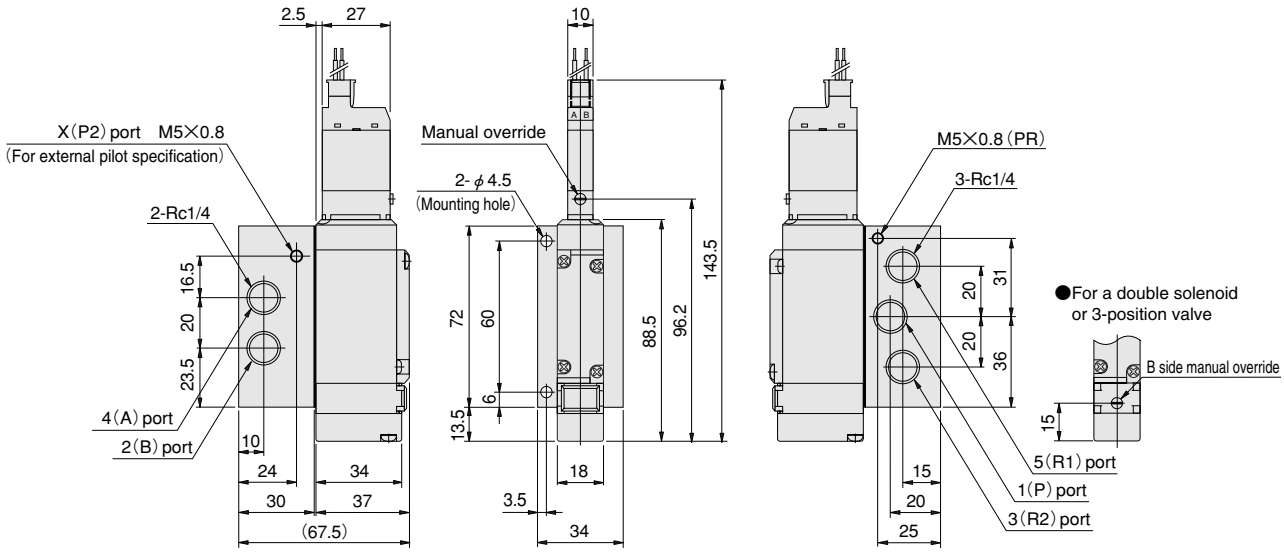


Note: The mounting bracket is an additional part (to be ordered separately).

F18T

F18T Valve specification Operation type -A2-PS

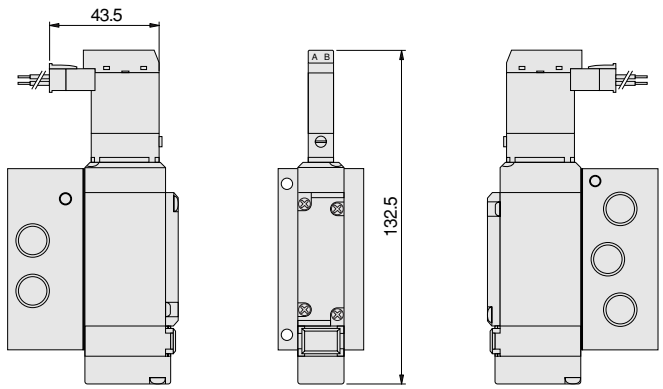
With an A type sub-base
S type plug connector



Note: The overall valve length of the T0 type is 12mm [0.472in.] shorter (the end cover protrusion is 12mm [0.472in.] shorter).

Option

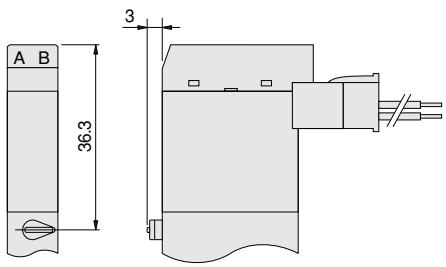
●L type plug connector: **-PL**



Note: The overall valve length of the T0 type is 12mm [0.472in.] shorter
(the end cover protrusion is 12mm [0.472in.] shorter).

Made to Order

●Manual override lever

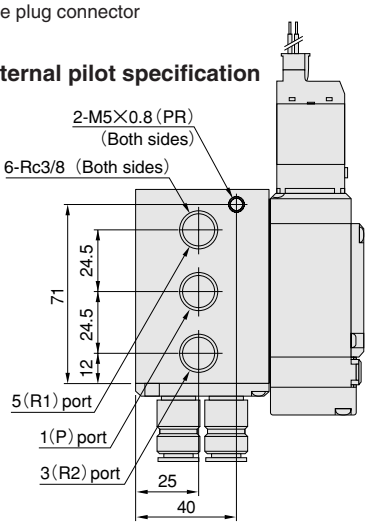


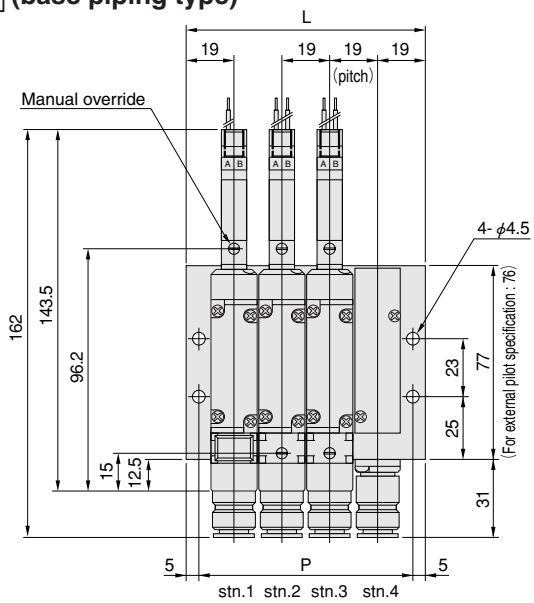
F18M Number of units A J/M Pilot specification (base piping type)

F18MA

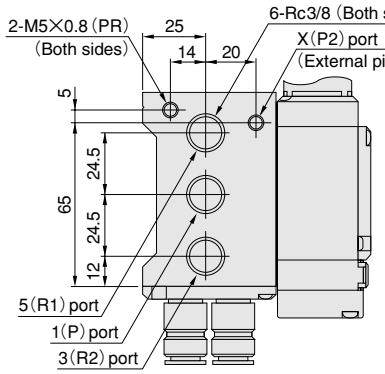
Monoblock manifold A type
Manifold with outlet port different size fitting blocks
S type plug connector

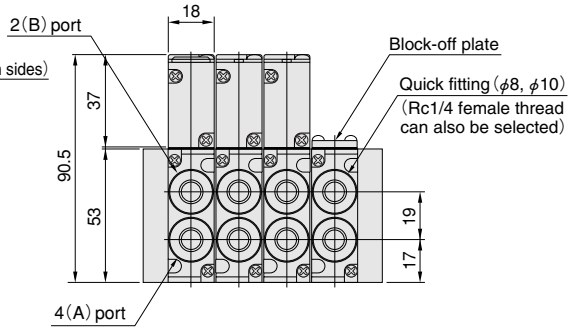
●Internal pilot specification





●External pilot specification(Note)





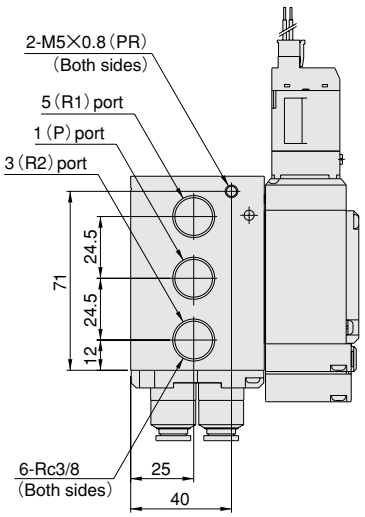
Note: For the external pilot specifications, the body shape of the monoblock manifold A type differs from the internal pilot specifications.

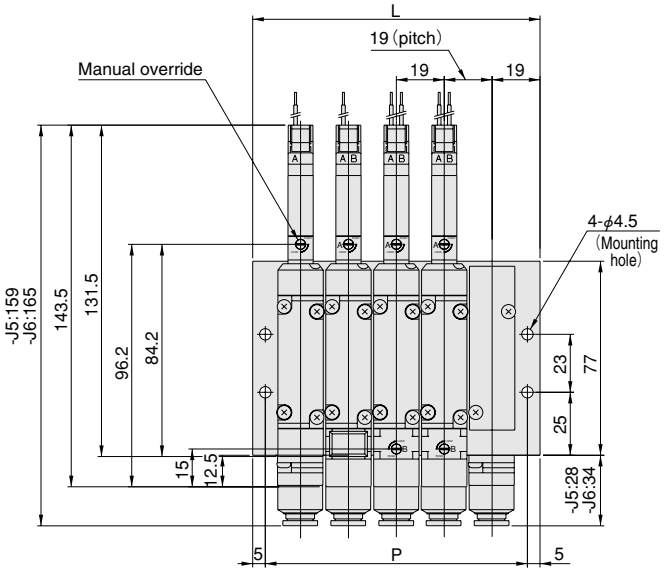
Unit dimensions

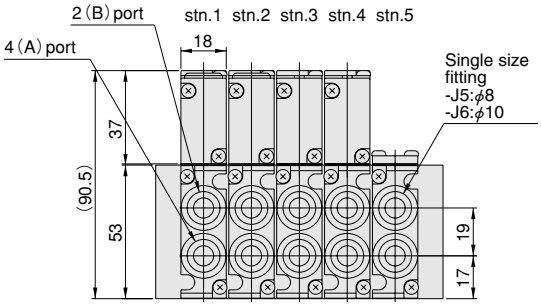
Number of units	L	P
2	57	47
3	76	66
4	95	85
5	114	104
6	133	123
7	152	142
8	171	161
9	190	180
10	209	199
11	228	218
12	247	237
13	266	256
14	285	275
15	304	294
16	323	313
17	342	332
18	361	351
19	380	370
20	399	389

F18M Number of units AL Pilot specification (base piping type)

Monoblock manifold A type
Manifold with outlet port single size fitting blocks
S type plug connector







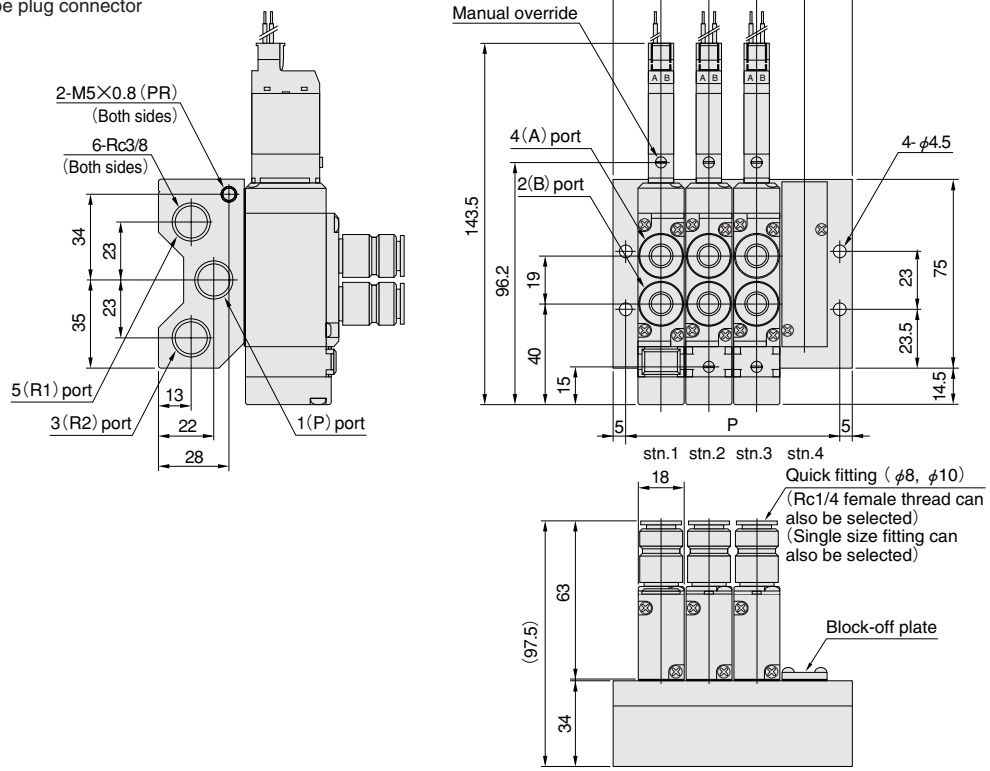
Unit dimensions

Number of units	L	P
2	57	47
3	76	66
4	95	85
5	114	104
6	133	123
7	152	142
8	171	161
9	190	180
10	209	199
11	228	218
12	247	237
13	266	256
14	285	275
15	304	294
16	323	313
17	342	332
18	361	351
19	380	370
20	399	389

F18M Number of units F (direct piping type)

F18MF

Monoblock manifold F type
Valves with outlet port different size fitting blocks
S type plug connector



Unit dimensions

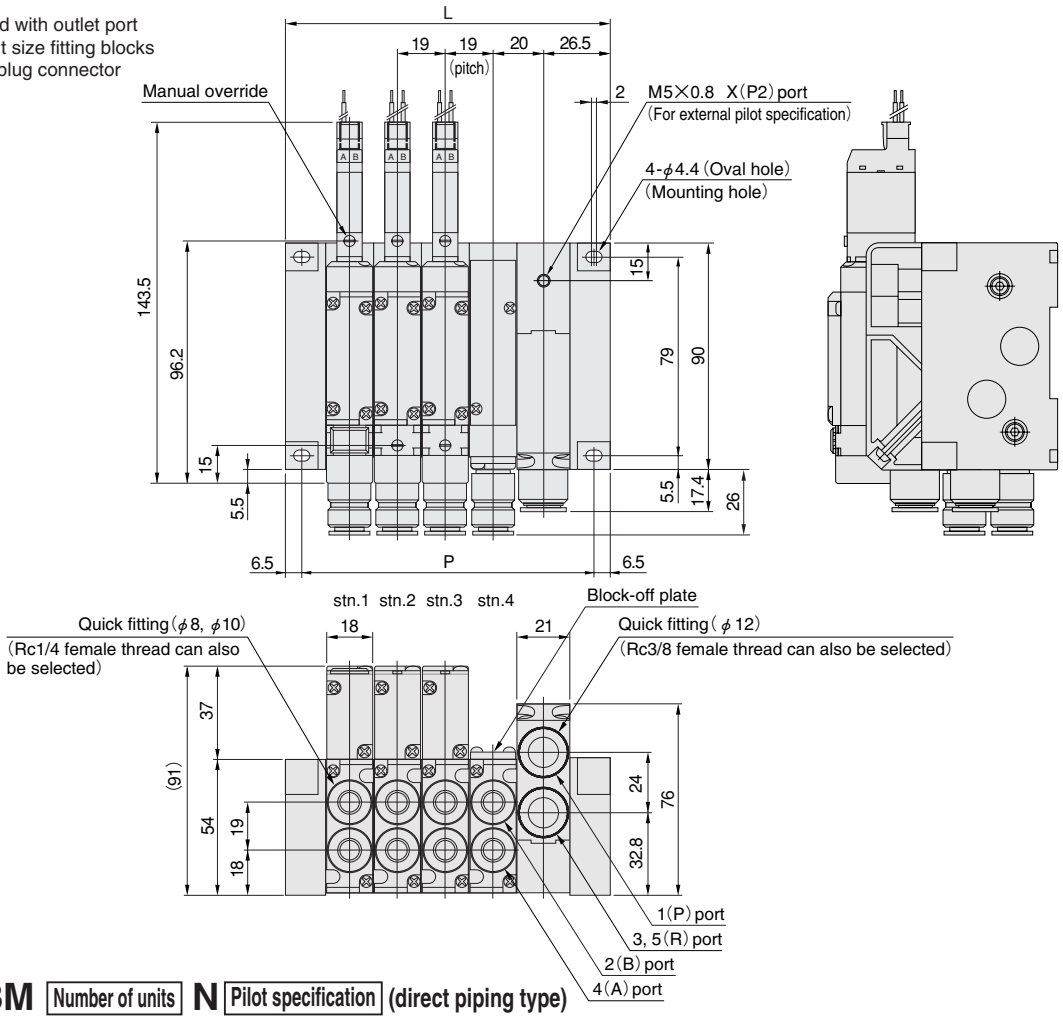
Number of units	L	P
2	57	47
3	76	66
4	95	85
5	114	104
6	133	123
7	152	142
8	171	161
9	190	180
10	209	199
11	228	218
12	247	237
13	266	256
14	285	275
15	304	294
16	323	313
17	342	332
18	361	351
19	380	370
20	399	389

Note: The overall valve length of the T0 type is 12mm [0.472in.] shorter (the end cover protrusion is 12mm [0.472in.] shorter).

F18M [Number of units] N J/M [Pilot specification] (base piping type)

F18MNJ

Manifold with outlet port
different size fitting blocks
S type plug connector



Unit dimensions

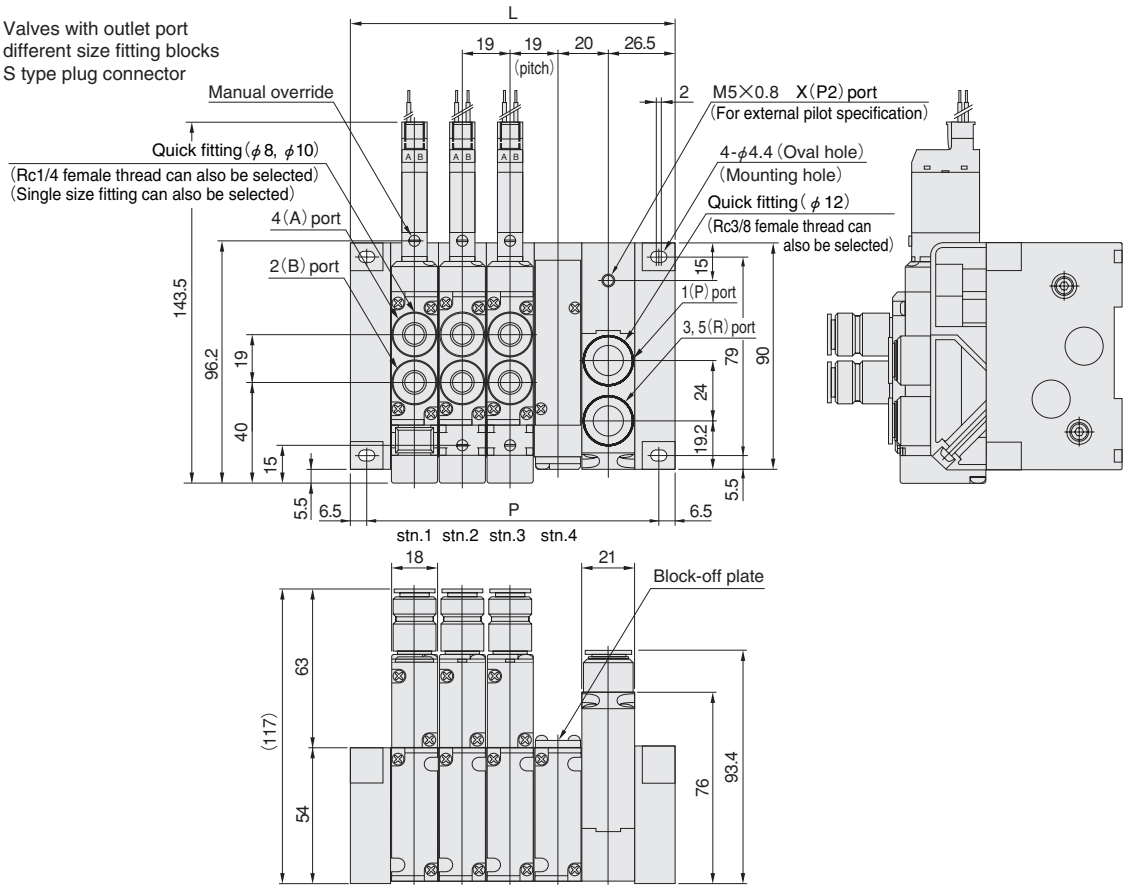
Number of units	L	P
2	91	78
3	110	97
4	129	116
5	148	135
6	167	154
7	186	173
8	205	192
9	224	211
10	243	230
11	262	249
12	281	268
13	300	287
14	319	306
15	338	325
16	357	344
17	376	363
18	395	382
19	414	401
20	433	420

Remark: When using 2 piping blocks, add 21 to the L and P dimensions shown above.

F18M [Number of units] N [Pilot specification] (direct piping type)

F18MN

Valves with outlet port
different size fitting blocks
S type plug connector



Unit dimensions

Number of units	L	P
2	91	78
3	110	97
4	129	116
5	148	135
6	167	154
7	186	173
8	205	192
9	224	211
10	243	230
11	262	249
12	281	268
13	300	287
14	319	306
15	338	325
16	357	344
17	376	363
18	395	382
19	414	401
20	433	420

Remark: When using 2 piping blocks, add 21 to the L and P dimensions shown above.

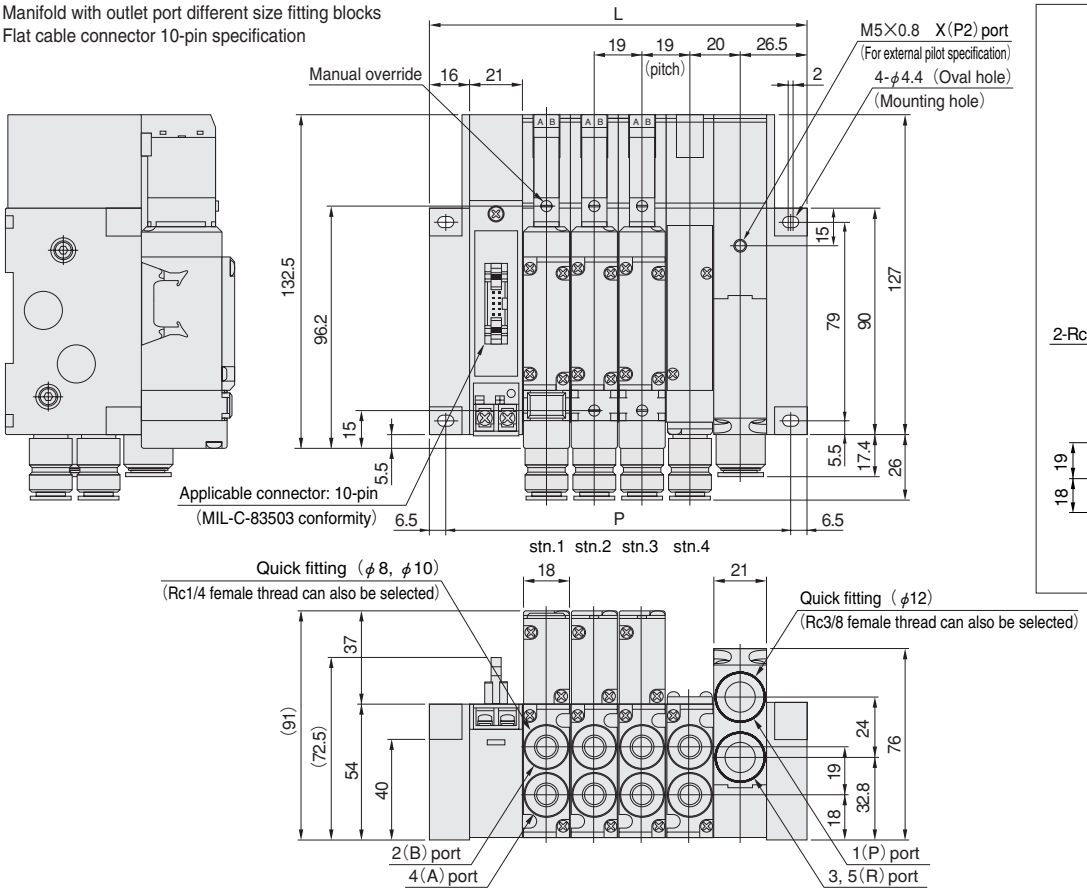
Note: The overall valve length of the T0 type is 12mm [0.472in.] shorter (the end cover protrusion is 12mm [0.472in.] shorter).

F18 Series Dimensions of Split Manifold Plug-in Type (mm)

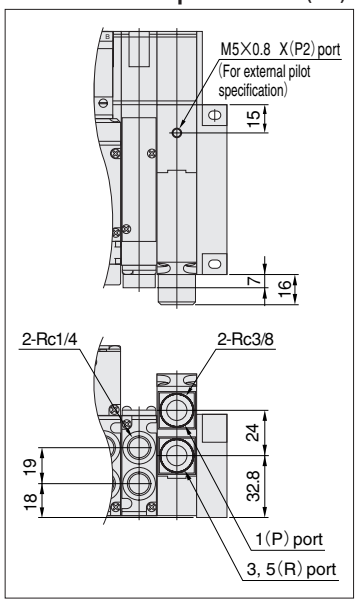
Combination of F18MPJ and F18-CONT

F18M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
Flat cable connector 10-pin specification



Female thread specification (mm)



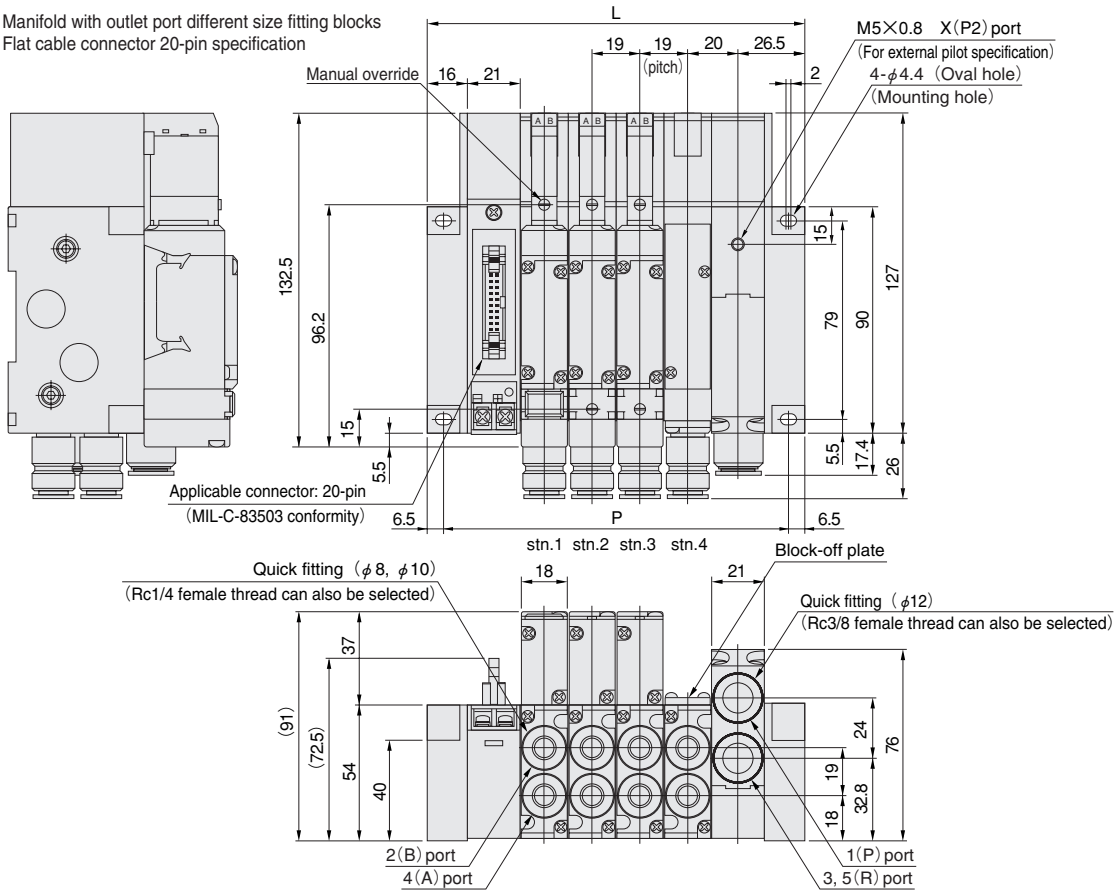
Unit dimensions

Number of units	L	P
2	112	99
3	131	118
4	150	137
5	169	156
6	188	175
7	207	194
8	226	213

Remark: When using 2 piping blocks, add 21 to the L and P dimensions shown above.

F18M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
Flat cable connector 20-pin specification



Unit dimensions

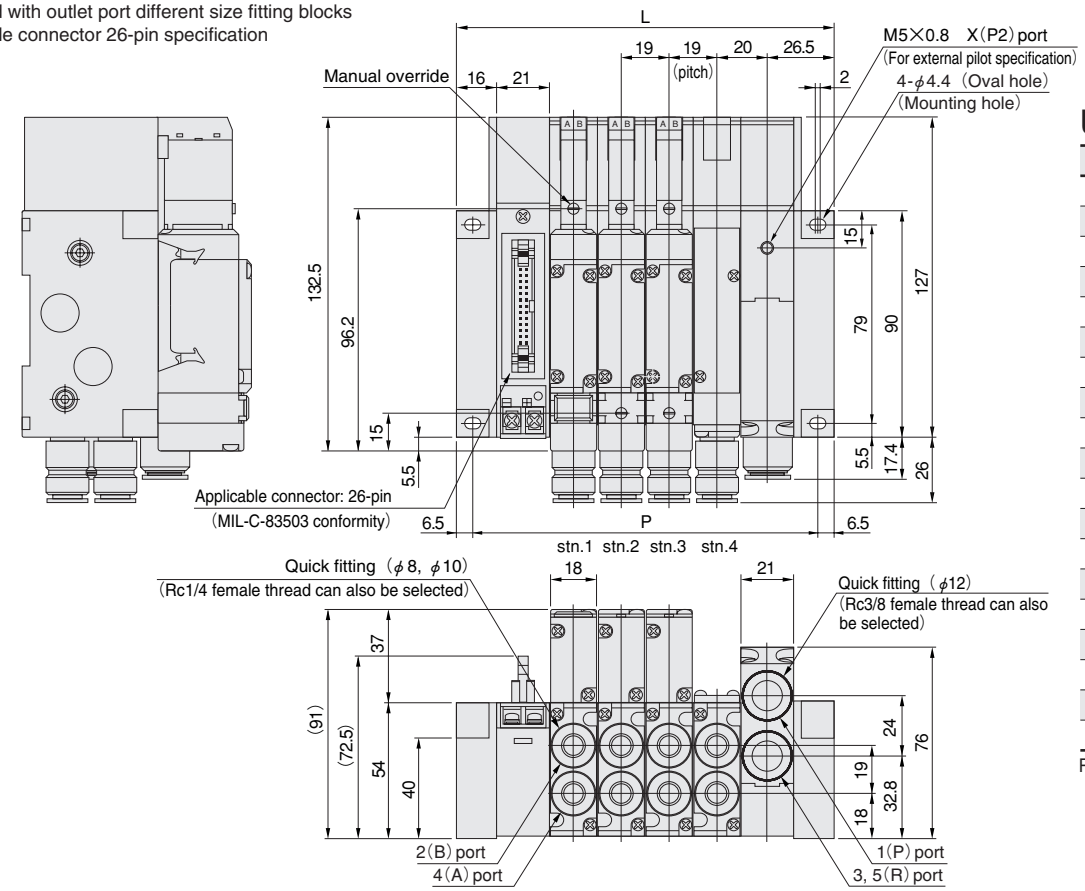
Number of units	L	P
2	112	99
3	131	118
4	150	137
5	169	156
6	188	175
7	207	194
8	226	213
9	245	232
10	264	251
11	283	270
12	302	289
13	321	308
14	340	327
15	359	346
16	378	365

Remark: When using 2 piping blocks, add 21 to the L and P dimensions shown above.

Combination of F18MPJ and F18-CONT

F18M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
Flat cable connector 26-pin specification



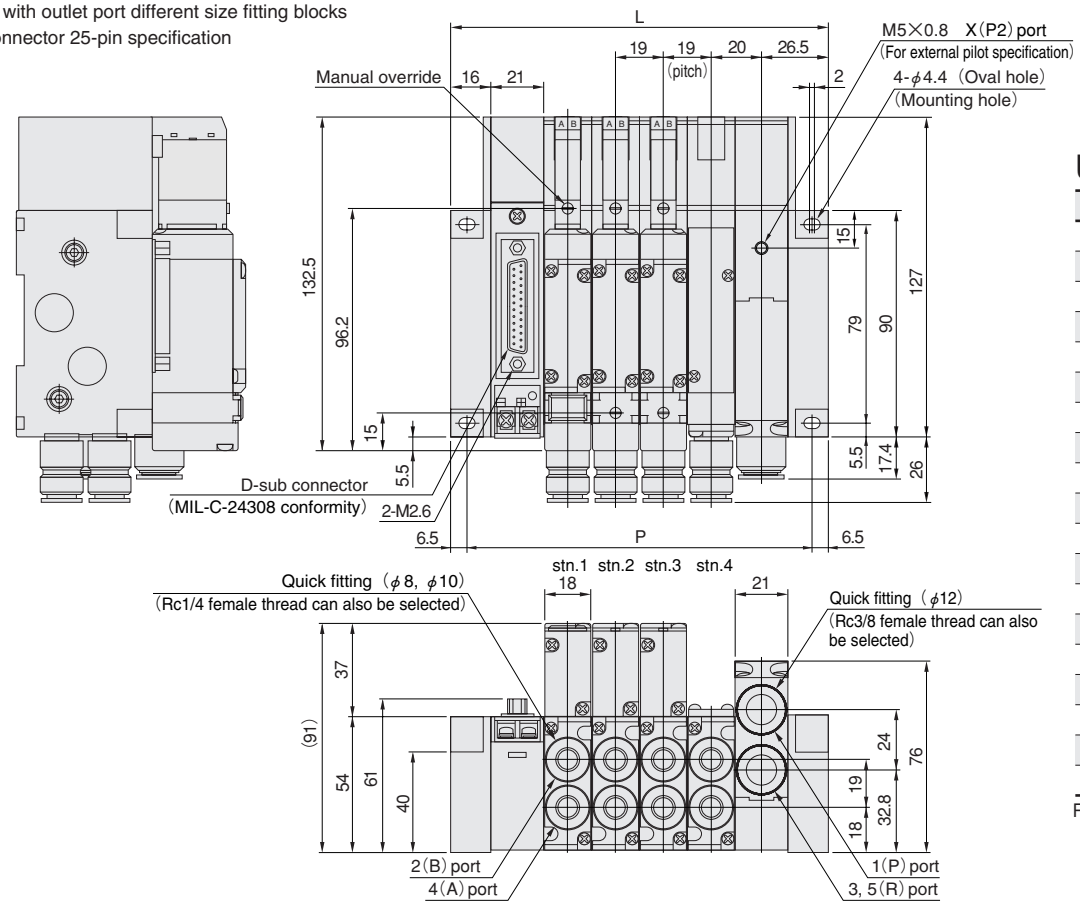
Unit dimensions

Number of units	L	P
2	112	99
3	131	118
4	150	137
5	169	156
6	188	175
7	207	194
8	226	213
9	245	232
10	264	251
11	283	270
12	302	289
13	321	308
14	340	327
15	359	346
16	378	365
17	397	384
18	416	403
19	435	422
20	454	441

Remark: When using 2 piping blocks, add 21 to the L and P dimensions shown above.

F18M [Number of units] P J/M [Pilot specification] (base piping type)

Manifold with outlet port different size fitting blocks
D-sub connector 25-pin specification



Unit dimensions

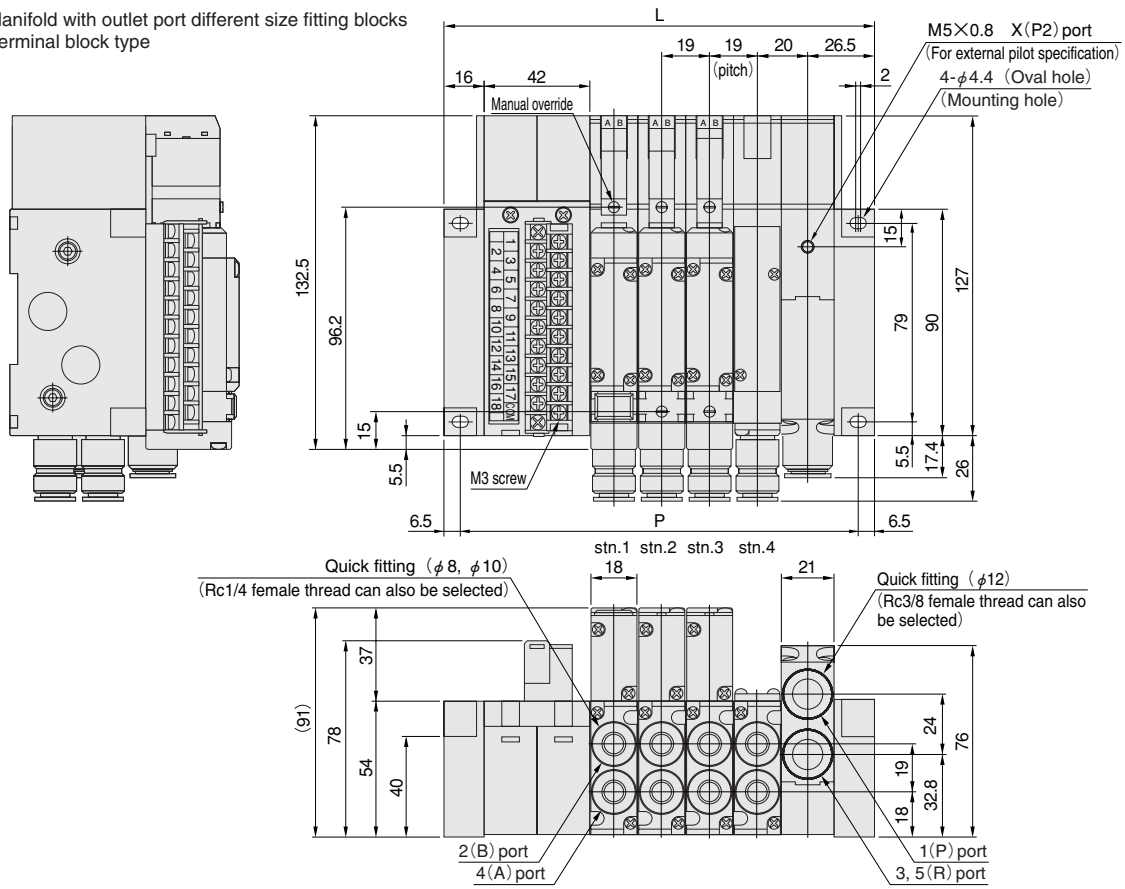
Number of units	L	P
2	112	99
3	131	118
4	150	137
5	169	156
6	188	175
7	207	194
8	226	213
9	245	232
10	264	251
11	283	270
12	302	289
13	321	308
14	340	327
15	359	346
16	378	365
17	397	384
18	416	403
19	435	422
20	454	441

Remark: When using 2 piping blocks, add 21 to the L and P dimensions shown above.

F18M [Number of units] P [J / M] [Pilot specification] (base piping type)

CAD Combination of F18MPJ and F18-CONT

Manifold with outlet port different size fitting blocks
Terminal block type



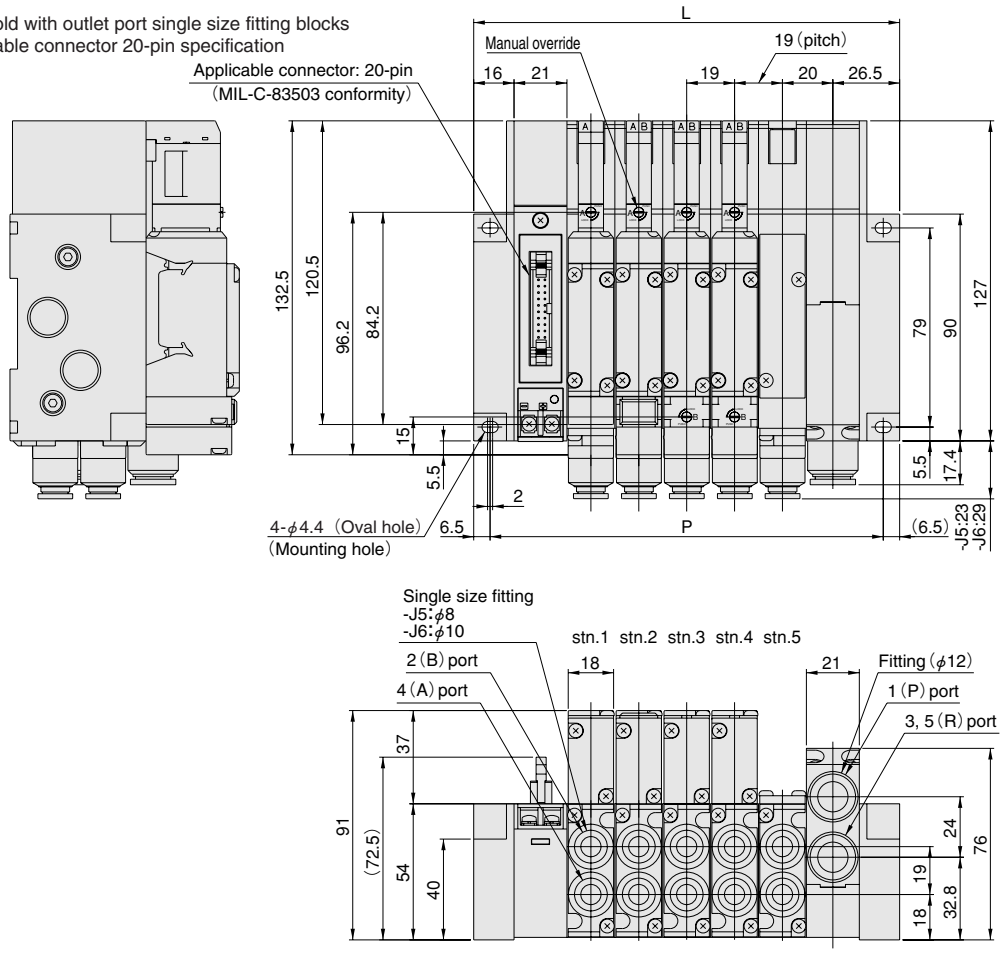
Unit dimensions

Number of units	L	P
2	133	120
3	152	139
4	171	158
5	190	177
6	209	196
7	228	215
8	247	234
9	266	253
10	285	272
11	304	291
12	323	310
13	342	329
14	361	348
15	380	367
16	399	386
17	418	405
18	437	424

Remark: When using 2 piping blocks, add 21 to the L and P dimensions shown above.

F18M [Number of units] PL [Pilot specification] (base piping type)

Manifold with outlet port single size fitting blocks
Flat cable connector 20-pin specification



Unit dimensions

Number of units	L	P
2	112	99
3	131	118
4	150	137
5	169	156
6	188	175
7	207	194
8	226	213
9	245	232
10	264	251
11	283	270
12	302	289
13	321	308
14	340	327
15	359	346
16	378	365
17	397	384
18	416	403
19	435	422
20	454	441

Remark: When using 2 piping blocks, add 21 to the L and P dimensions shown above.

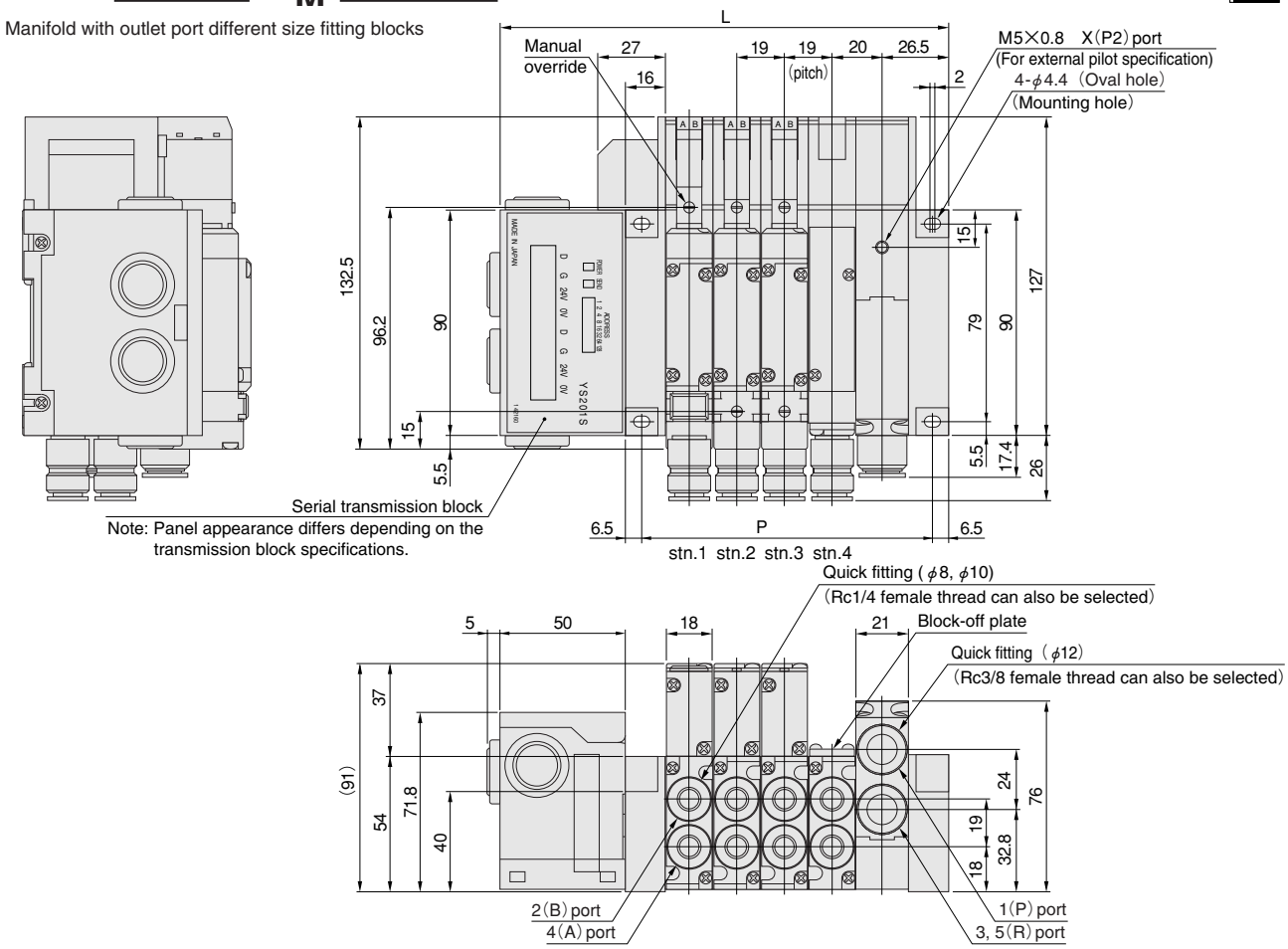
F18 Series Dimensions of Serial Transmission Compatible Manifold (mm)

※For the dimensions of the manifold for the OMRON CompoBus/D, see p.613.

F18M Number of units S J M Pilot specification (base piping type)

F18MSJ

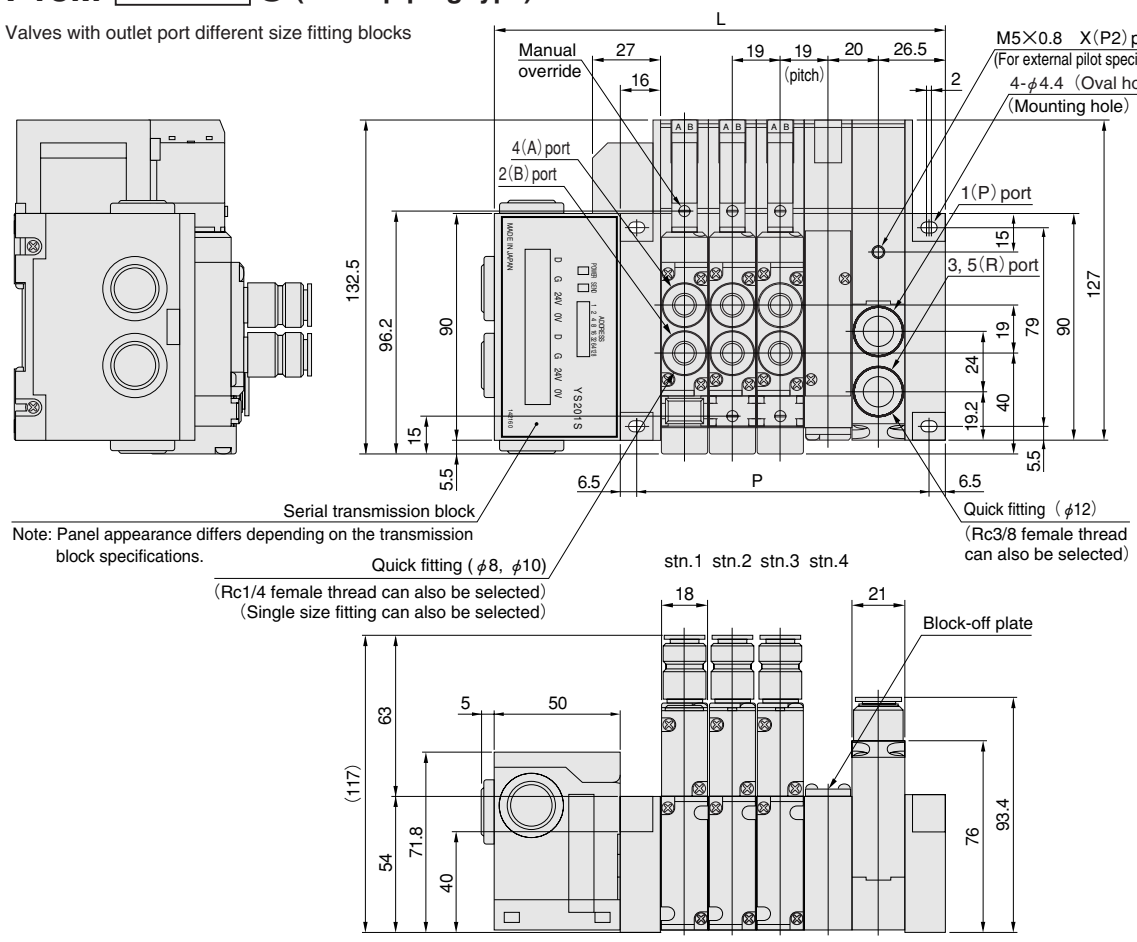
Manifold with outlet port different size fitting blocks



F18M Number of units S (direct piping type)

F18MS

Valves with outlet port different size fitting blocks



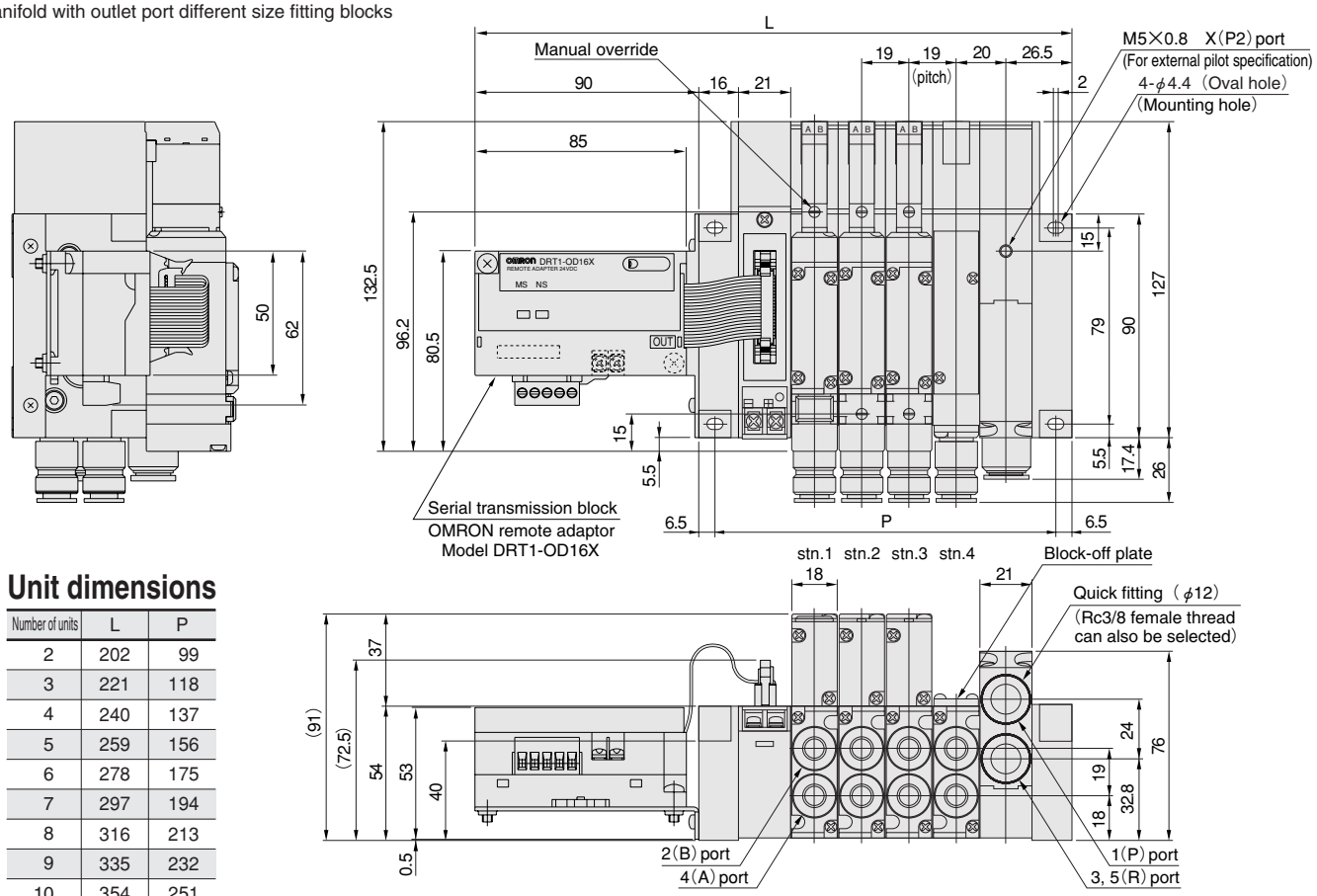
Unit dimensions

Number of units	L	P
2	141	78
3	160	97
4	179	116
5	198	135
6	217	154
7	236	173
8	255	192
9	274	211
10	293	230
11	312	249
12	331	268
13	350	287
14	369	306
15	388	325
16	407	344

Remark: When using 2 piping blocks, add 21 to the L and P dimensions shown above.

F18M Number of units S J/M Pilot specification (base piping type)

Manifold with outlet port different size fitting blocks



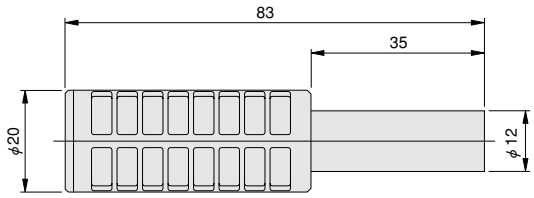
Unit dimensions

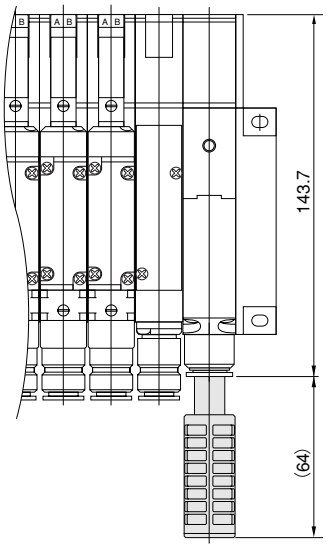
Number of units	L	P
2	202	99
3	221	118
4	240	137
5	259	156
6	278	175
7	297	194
8	316	213
9	335	232
10	354	251
11	373	270
12	392	289
13	411	308
14	430	327
15	449	346
16	468	365

Remark: When using 2 piping blocks, add 21 to the L and P dimensions shown above.

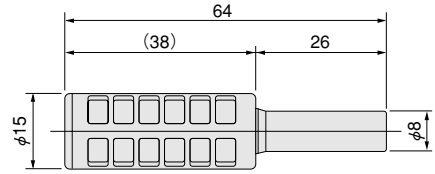
Additional Parts (To be ordered separately)

●Muffler: **KM-J12** [For both plug-in and non-plug-in types]

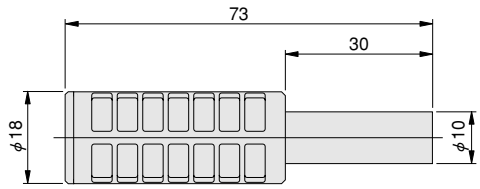




●Muffler: **KM-J8** [For Individual exhaust spacer only]



●Muffler: **KM-J10** [For Individual exhaust spacer only]



F Series Specifications Confirmation Form

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Example of Specifications Confirmation Form

Example 1

When ordering F series manifolds, use this specifications confirmation form for complex model configurations, for confirming specifications, etc.
Using the example below for reference, fill out the required items in the “Specifications Confirmation Forms” found on p.617 and up, and send it.
(Make copies of the Specifications Confirmation Form for your use.)

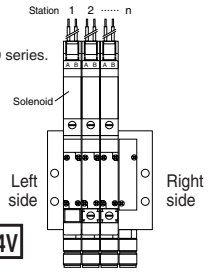
Monoblock Manifold A type

Specifications Confirmation Form

Order Date Month/ Day/ Year/

Company name	
Contact person	
Order No.	

●Fill in selections inside the thick-lined boxes.



Manifold model

F 10 M 8 A J □

Valve size
10 : 10mm width
15 : 15mm width
18 : 18mm width

Valve units
2～**20**

Manifold outlet specification
J : With dual-use different size fitting blocks
M : With female thread blocks
L : With selectable fitting blocks

Pilot specification
Blank : Internal pilot manifold
G : External pilot manifold

stn. □ F Valve size **T** Valve specification **□** - Note 3 - **A1-** **PS** - Note 4 - Note 5 **DC24V**

Operation type
Blank : Internal pilot type Note 1
G : External pilot type (for positive pressure) Note 2
V : External pilot type (for vacuum) Note 2

Manual override
Blank : Manual override button
R : Manual override lever Note 3 (made to order)

Individual air supply and exhaust spacer Note 5
Blank : Without spacer
NPM : Individual air supply spacer (with M5 female thread for F10)
NP6 : Individual air supply spacer (with ϕ6 fitting for F15)
NP8 : Individual air supply spacer (with ϕ8 fitting for F15 and F18)
NP0 : Individual air supply spacer (with ϕ10 fitting for F18)
NRM : Individual exhaust spacer (with M5 female thread for F10)
NR6 : Individual exhaust spacer (with ϕ6 fitting for F15)
NR8 : Individual exhaust spacer (with ϕ8 fitting for F15 and F18)
NR0 : Individual exhaust spacer (with ϕ10 fitting for F18)

Voltage
DC24V
DC12V
AC100V

Wiring specification
Blank : L type plug connector Without connector
PN : S type plug connector Without connector
PS : S type plug connector Lead wire length 300mm [11.8in.]
PL : L type plug connector Lead wire length 300mm [11.8in.]
PS3 : S type plug connector Lead wire length 3000mm [118in.]
PL3 : L type plug connector Lead wire length 3000mm [118in.]
CPS : Pre-wired positive common terminal S type plug connector Lead wire length 300mm [11.8in.]
CPL : Pre-wired positive common terminal L type plug connector Lead wire length 300mm [11.8in.]
CPS3 : Pre-wired positive common terminal S type plug connector Lead wire length 3000 mm [118in.]
CPL3 : Pre-wired positive common terminal L type plug connector Lead wire length 3000 mm [118in.]

Manifold fitting specification Note 4
Can be selected in manifold outlet specification **L** (with selectable fitting).
J5 : Manifold side outlet port with single size fitting block **F10**: ϕ4, **F15**: ϕ6, **F18**: ϕ8
J6 : Manifold side outlet port with single size fitting block **F10**: ϕ6, **F15**: ϕ8, **F18**: ϕ10
M : Manifold side outlet port with female thread block **F10**: M5×0.8, **F15**: Rc1/8, **F18**: Rc1/4
J5A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: ϕ4, **F15**: ϕ6
J5B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: ϕ4, **F15**: ϕ6
J6A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: ϕ6, **F15**: ϕ8
J6B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: ϕ6, **F15**: ϕ8
MA : Manifold side outlet port with female thread block, 3-port normally closed (NC) **F10**: M5×0.8, **F15**: Rc1/8
MB : Manifold side outlet port with female thread block, 3-port normally open (NO) **F10**: M5×0.8, **F15**: Rc1/8

Mounting valve models

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
F□T0	2-position, for single solenoid only	○	○																		
F□T1	2-position, single solenoid specification			○	○																
F□T2	2-position, double solenoid specification					○	○														
F□T3	3-position, closed center							○													
F□T4 Note 6	3-position, exhaust center								○												
F□T5 Note 6	3-position, pressure center																				
F□BP	Block-off plate																				
Manual override (**-R**) Manual override lever		○	○																		
Manifold fitting specification Note 4 (Manifold side outlet port)	**J5** With single size fitting block																				
	J6 With single size fitting block																				
	M With female thread block																				
	J5A With single size fitting block, 3-port normally closed (NC)																				
	J5B With single size fitting block, 3-port normally open (NO)																				
	J6A With single size fitting block, 3-port normally closed (NC)																				
	J6B With single size fitting block, 3-port normally open (NO)																				
	MA With female thread block, 3-port normally closed (NC)																				
	MB With female thread block, 3-port normally open (NO)																				
NPM Individual air supply spacer (with M5 female thread for F10)				○	○																
NP6 Individual air supply spacer (with ϕ6 fitting for F15)																					
NP8 Individual air supply spacer (with ϕ8 fitting for F15 and F18)																					
NP0 Individual air supply spacer (with ϕ10 fitting for F18)																					
NRM Individual exhaust spacer (with M5 female thread for F10)																					
NR6 Individual exhaust spacer (with ϕ6 fitting for F15)																					
NR8 Individual exhaust spacer (with ϕ8 fitting for F15 and F18)																					
NR0 Individual exhaust spacer (with ϕ10 fitting for F18)																					

Notes: 1. Cannot be mounted on the external pilot manifold.
2. Cannot be mounted on the internal pilot manifold.
3. To designate a manual override lever, enter ○ in the manual override boxes of the designated stations in the above table.
4. When the manifold outlet specifications are **L** (with selectable fitting), select fitting specification for each station, and enter ○ in the manifold fitting specification boxes of the above table. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
5. When mounting the individual air supply or exhaust spacer, enter ○ in the spacer boxes of the designated stations in the above table.
6. Not available with vacuum valves.

Quantity	5 set	Delivery	June 1

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Example of Specifications Confirmation Form

Example 2

Monoblock Manifold F Type

Specifications Confirmation Form

Order Date Month/ Day/ Year/

Company name	
Contact person	
Order No.	

●Fill in selections inside the thick-lined boxes.

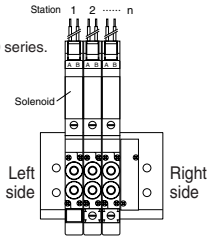
Manifold model

F 10 M 8 F

Valve size
10 : 10mm width
15 : 15mm width
18 : 18mm width

Valve units
2～**20**

This diagram shows the F10 series.



Mounting valve models

stn. ☐ F [Valve size] **T** [Valve specification] - [Note 1] - [Note 2] - **PS** - [Note 3] **AC100V**

Manual override
Blank : Manual override button
R : Manual override lever[Note 1] (made to order)

Valve outlet type[Note 2]
FJ : With dual-use different size fitting block (**F10**: φ4 and φ6, **F15**: φ6 and φ8, **F18**: φ8 and φ10)
FJ5 : With single size fitting block (**F10**: φ4, **F15**: φ6, **F18**: φ8)
FJ6 : With single size fitting block (**F10**: φ6, **F15**: φ8, **F18**: φ10)
FM : With female thread block (**F10**: M5×0.8, **F15**: Rc1/8, **F18**: Rc1/4)
FJ5A : With single size fitting block, 3-port normally closed (NC) (**F10**: φ4, **F15**: φ6)
FJ5B : With single size fitting block, 3-port normally open (NO) (**F10**: φ4, **F15**: φ6)
FJ6A : With single size fitting block, 3-port normally closed (NC) (**F10**: φ6, **F15**: φ8)
FJ6B : With single size fitting block, 3-port normally open (NO) (**F10**: φ6, **F15**: φ8)
FMA : With female thread block, 3-port normally closed (NC) (**F10**: M5×0.8, **F15**: Rc1/8)
FMB : With female thread block, 3-port normally open (NO) (**F10**: M5×0.8, **F15**: Rc1/8)

Individual air supply and exhaust spacer[Note 3]
Blank : Without spacer
NPM : Individual air supply spacer (with M5 female thread for F10)
NP6 : Individual air supply spacer (with φ6 fitting for F15)
NP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
NP0 : Individual air supply spacer (with φ10 fitting for F18)
NRM : Individual exhaust spacer (with M5 female thread for F10)
NR6 : Individual exhaust spacer (with φ6 fitting for F15)
NR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
NR0 : Individual exhaust spacer (with φ10 fitting for F18)

Wiring specification
Blank : L type plug connector Without connector
PN : S type plug connector Without connector
PS : S type plug connector Lead wire length 300mm [11.8in.]
PL : L type plug connector Lead wire length 300mm [11.8in.]
PS3 : S type plug connector Lead wire length 3000mm [118in.]
PL3 : L type plug connector Lead wire length 3000mm [118in.]
CPS : Pre-wired positive common terminal S type plug connector Lead wire length 300mm [11.8in.]
CPL : Pre-wired positive common terminal L type plug connector Lead wire length 300mm [11.8in.]
CPS3 : Pre-wired positive common terminal S type plug connector Lead wire length 3000mm [118in.]
CPL3 : Pre-wired positive common terminal L type plug connector Lead wire length 3000mm [118in.]

Voltage
DC24V
DC12V
AC100V

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
F☐T0	2-position, for single solenoid only	○	○																		
F☐T1	2-position, single solenoid specification			○	○																
F☐T2	2-position, double solenoid specification					○	○														
F☐T3	3-position, closed center							○													
F☐T4	3-position, exhaust center								○												
F☐T5	3-position, pressure center																				
F☐BP	Block-off plate																				
Manual override (**-R**) Manual override lever																					
Valve outlet type[Note 2]	**FJ** With dual-use different size fitting block	○	○	○	○																
	FJ5 With single size fitting block					○															
	FJ6 With single size fitting block						○														
	FM With female thread block							○	○												
	FJ5A With single size fitting block, 3-port normally closed (NC)																				
	FJ5B With single size fitting block, 3-port normally open (NO)																				
	FJ6A With single size fitting block, 3-port normally closed (NC)																				
	FJ6B With single size fitting block, 3-port normally open (NO)																				
	FMA With female thread block, 3-port normally closed (NC)																				
	FMB With female thread block, 3-port normally open (NO)																				
NPM	Individual air supply spacer (with M5 female thread for F10)																				
NP6	Individual air supply spacer (with φ6 fitting for F15)																				
NP8	Individual air supply spacer (with φ8 fitting for F15 and F18)																				
NP0	Individual air supply spacer (with φ10 fitting for F18)																				
NRM	Individual exhaust spacer (with M5 female thread for F10)																				
NR6	Individual exhaust spacer (with φ6 fitting for F15)																				
NR8	Individual exhaust spacer (with φ8 fitting for F15 and F18)																				
NR0	Individual exhaust spacer (with φ10 fitting for F18)																				

Notes: 1. To designate a manual override lever, enter ○ in the manual override boxes of the designated stations in the above table.
2. Select manifold fitting specification for each station, and enter ○ in the valve outlet type boxes of the above table. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
3. When mounting the individual air supply or exhaust spacer, enter ○ in the spacer boxes of the designated stations in the above table.

Quantity	5 set	Delivery	June 1

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Monoblock Manifold A type

Specifications Confirmation Form

Order Date Month/ Day/ Year/

Company name	
Contact person	
Order No.	

●Fill in selections inside the thick-lined boxes.

Manifold model

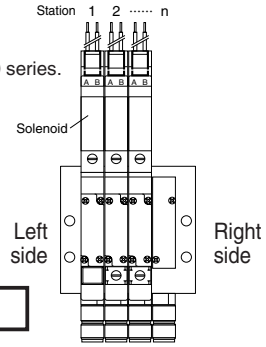
F□M□A□□

Valve size
10 : 10mm width
15 : 15mm width
18 : 18mm width

Valve units
2～**20**

Manifold outlet specification
J : With dual-use different size fitting blocks
M : With female thread blocks
L : With selectable fitting blocks

Pilot specification
Blank : Internal pilot manifold
G : External pilot manifold



This diagram shows the F10 series.

Mounting valve models

stn. □**F** Valve size **T** Valve specification □ - Note 3 - **A1-** □ - Note 4 - Note 5 □

Operation type
Blank : Internal pilot type[Note 1]
G : External pilot type (for positive pressure)[Note 2]
V : External pilot type (for vacuum)[Note 2]

Manual override
Blank : Manual override button
R : Manual override lever[Note 3] (made to order)

Voltage
DC24V
DC12V
AC100V

Individual air supply and exhaust spacer[Note 5]
Blank : Without spacer
NPM : Individual air supply spacer (with M5 female thread for F10)
NP6 : Individual air supply spacer (with φ6 fitting for F15)
NP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
NP0 : Individual air supply spacer (with φ10 fitting for F18)
NRM : Individual exhaust spacer (with M5 female thread for F10)
NR6 : Individual exhaust spacer (with φ6 fitting for F15)
NR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
NR0 : Individual exhaust spacer (with φ10 fitting for F18)

Wiring specification
Blank : L type plug connector Without connector
PN : S type plug connector Without connector
PS : S type plug connector Lead wire length 300mm [11.8in.]
PL : L type plug connector Lead wire length 300mm [11.8in.]
PS3 : S type plug connector Lead wire length 3000mm [118in.]
PL3 : L type plug connector Lead wire length 3000mm [118in.]
CPS : Pre-wired positive common terminal S type plug connector Lead wire length 300mm [11.8in.]
CPL : Pre-wired positive common terminal L type plug connector Lead wire length 300mm [11.8in.]
CPS3 : Pre-wired positive common terminal S type plug connector Lead wire length 3000 mm [118in.]
CPL3 : Pre-wired positive common terminal L type plug connector Lead wire length 3000 mm [118in.]

Manifold fitting specification[Note 4]
Can be selected in manifold outlet specification **L** (with selectable fitting).
J5 : Manifold side outlet port with single size fitting block **F10**: φ4, **F15**: φ6, **F18**: φ8
J6 : Manifold side outlet port with single size fitting block **F10**: φ6, **F15**: φ8, **F18**: φ10
M : Manifold side outlet port with female thread block **F10**: M5×0.8, **F15**: Rc1/8, **F18**: Rc1/4
J5A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: φ4, **F15**: φ6
J5B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: φ4, **F15**: φ6
J6A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: φ6, **F15**: φ8
J6B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: φ6, **F15**: φ8
MA : Manifold side outlet port with female thread block, 3-port normally closed (NC) **F10**: M5×0.8, **F15**: Rc1/8
MB : Manifold side outlet port with female thread block, 3-port normally open (NO) **F10**: M5×0.8, **F15**: Rc1/8

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
F□T0	2-position, for single solenoid only																				
F□T1	2-position, single solenoid specification																				
F□T2	2-position, double solenoid specification																				
F□T3	3-position, closed center																				
F□T4[Note 6]	3-position, exhaust center																				
F□T5[Note 6]	3-position, pressure center																				
F□BP	Block-off plate																				
Manual override	(**-R**) Manual override lever																				
Manifold fitting specification[Note 4] (Manifold side outlet port)	**J5** With single size fitting block																				
	J6 With single size fitting block																				
	M With female thread block																				
	J5A With single size fitting block, 3-port normally closed (NC)																				
	J5B With single size fitting block, 3-port normally open (NO)																				
	J6A With single size fitting block, 3-port normally closed (NC)																				
	J6B With single size fitting block, 3-port normally open (NO)																				
	MA With female thread block, 3-port normally closed (NC)																				
	MB With female thread block, 3-port normally open (NO)																				
NPM	Individual air supply spacer (with M5 female thread for F10)																				
NP6	Individual air supply spacer (with φ6 fitting for F15)																				
NP8	Individual air supply spacer (with φ8 fitting for F15 and F18)																				
NP0	Individual air supply spacer (with φ10 fitting for F18)																				
NRM	Individual exhaust spacer (with M5 female thread for F10)																				
NR6	Individual exhaust spacer (with φ6 fitting for F15)																				
NR8	Individual exhaust spacer (with φ8 fitting for F15 and F18)																				
NR0	Individual exhaust spacer (with φ10 fitting for F18)																				

Notes: 1. Cannot be mounted on the external pilot manifold.
2. Cannot be mounted on the internal pilot manifold.
3. To designate a manual override lever, enter ○ in the manual override boxes of the designated stations in the above table.
4. When the manifold outlet specifications are **L** (with selectable fitting), select fitting specification for each station, and enter ○ in the manifold fitting specification boxes of the above table. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
5. When mounting the individual air supply or exhaust spacer, enter ○ in the spacer boxes of the designated stations in the above table.
6. Not available with vacuum valves.

Quantity set	Delivery

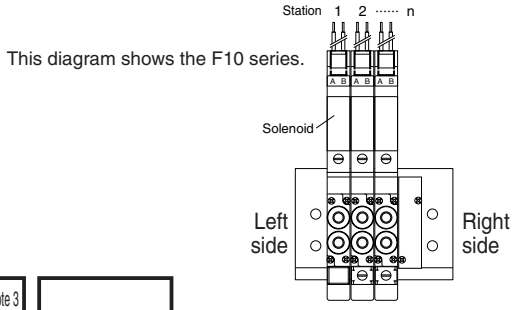
Monoblock Manifold F Type

Specifications Confirmation Form

Order Date Month/ Day/ Year/

Company name	
Contact person	
Order No.	

●Fill in selections inside the thick-lined boxes.



Manifold model

F□M□F

Valve size
10 : 10mm width
15 : 15mm width
18 : 18mm width

Valve units
2～20

stn. □ F Valve size **T** Valve specification **-** Note 1 **-** Note 2 **-** **-** Note 3 **-**

Manual override
Blank : Manual override button
R : Manual override lever[Note 1] (made to order)

Valve outlet type[Note 2]
FJ : With dual-use different size fitting block (**F10**: φ4 and φ6, **F15**: φ6 and φ8, **F18**: φ8 and φ10)
FJ5 : With single size fitting block (**F10**: φ4, **F15**: φ6, **F18**: φ8)
FJ6 : With single size fitting block (**F10**: φ6, **F15**: φ8, **F18**: φ10)
FM : With female thread block (**F10**: M5×0.8, **F15**: Rc1/8, **F18**: Rc1/4)
FJ5A : With single size fitting block, 3-port normally closed (NC) (**F10**: φ4, **F15**: φ6)
FJ5B : With single size fitting block, 3-port normally open (NO) (**F10**: φ4, **F15**: φ6)
FJ6A : With single size fitting block, 3-port normally closed (NC) (**F10**: φ6, **F15**: φ8)
FJ6B : With single size fitting block, 3-port normally open (NO) (**F10**: φ6, **F15**: φ8)
FMA : With female thread block, 3-port normally closed (NC) (**F10**: M5×0.8, **F15**: Rc1/8)
FMB : With female thread block, 3-port normally open (NO) (**F10**: M5×0.8, **F15**: Rc1/8)

Individual air supply and exhaust spacer[Note 3]
Blank : Without spacer
NPM : Individual air supply spacer (with M5 female thread for F10)
NP6 : Individual air supply spacer (with φ6 fitting for F15)
NP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
NP0 : Individual air supply spacer (with φ10 fitting for F18)
NRM : Individual exhaust spacer (with M5 female thread for F10)
NR6 : Individual exhaust spacer (with φ6 fitting for F15)
NR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
NR0 : Individual exhaust spacer (with φ10 fitting for F18)

Voltage
DC24V
DC12V
AC100V

Wiring specification
Blank : L type plug connector Without connector
PN : S type plug connector Without connector
PS : S type plug connector Lead wire length 300mm [11.8in.]
PL : L type plug connector Lead wire length 300mm [11.8in.]
PS3 : S type plug connector Lead wire length 3000mm [118in.]
PL3 : L type plug connector Lead wire length 3000mm [118in.]
CPS : Pre-wired positive common terminal S type plug connector Lead wire length 300mm [11.8in.]
CPL : Pre-wired positive common terminal L type plug connector Lead wire length 300mm [11.8in.]
CPS3 : Pre-wired positive common terminal S type plug connector Lead wire length 3000mm [118in.]
CPL3 : Pre-wired positive common terminal L type plug connector Lead wire length 3000mm [118in.]

Mounting valve models

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
F□T0	2-position, for single solenoid only																				
F□T1	2-position, single solenoid specification																				
F□T2	2-position, double solenoid specification																				
F□T3	3-position, closed center																				
F□T4	3-position, exhaust center																				
F□T5	3-position, pressure center																				
F□BP	Block-off plate																				
Manual override (**-R**) Manual override lever																					
Valve outlet type[Note 2]	**FJ** With dual-use different size fitting block																				
	FJ5 With single size fitting block																				
	FJ6 With single size fitting block																				
	FM With female thread block																				
	FJ5A With single size fitting block, 3-port normally closed (NC)																				
	FJ5B With single size fitting block, 3-port normally open (NO)																				
	FJ6A With single size fitting block, 3-port normally closed (NC)																				
	FJ6B With single size fitting block, 3-port normally open (NO)																				
	FMA With female thread block, 3-port normally closed (NC)																				
	FMB With female thread block, 3-port normally open (NO)																				
NPM	Individual air supply spacer (with M5 female thread for F10)																				
NP6	Individual air supply spacer (with φ6 fitting for F15)																				
NP8	Individual air supply spacer (with φ8 fitting for F15 and F18)																				
NP0	Individual air supply spacer (with φ10 fitting for F18)																				
NRM	Individual exhaust spacer (with M5 female thread for F10)																				
NR6	Individual exhaust spacer (with φ6 fitting for F15)																				
NR8	Individual exhaust spacer (with φ8 fitting for F15 and F18)																				
NR0	Individual exhaust spacer (with φ10 fitting for F18)																				

Notes: 1. To designate a manual override lever, enter ○ in the manual override boxes of the designated stations in the above table.
2. Select manifold fitting specification for each station, and enter ○ in the valve outlet type boxes of the above table. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
3. When mounting the individual air supply or exhaust spacer, enter ○ in the spacer boxes of the designated stations in the above table.

Quantity	set	Delivery

PC Board Manifold A Type

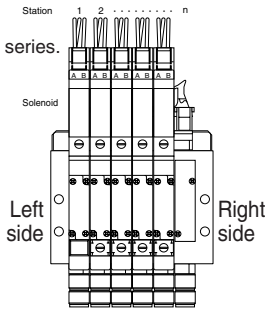
Specifications Confirmation Form 1/2

●Fill in selections inside the thick-lined boxes.

Order Date Month/ Day/ Year/

Company name	
Contact person	
Order No.	

This diagram shows the F10 series.



Manifold model

F□M□AP□□-□□-□

Wiring specification
F200
F201

Wiring connection specification
S : Single wiring
W : Double wiring

Pilot specification
Blank : Internal pilot manifold
G : External pilot manifold

Manifold outlet specification
J : With dual-use different size fitting blocks
M : With female thread blocks
L : With selectable fittings

Valve units
6～16 (only even-numbered units)

Caution: There should be 6 or 8 valve units, when the wiring connection specifications are **-W** (double wiring).

Valve size
10 : 10mm width
15 : 15mm width

Mounting valve models

stn.□F Valve size **T** Valve specification **□-** Note 3 **-A1-PP-** Note 4 **-** Note 5 **□**

Manual override
Blank : Manual override button
R : Manual override lever[Note 3] (made to order)

Operation type
Blank : Internal pilot type[Note 1]
G : External pilot type (for positive pressure)[Note 2]
V : External pilot type (for vacuum)[Note 2]

Individual air supply and exhaust spacer[Note 5]
Blank : Without spacer
NPM : Individual air supply spacer (with M5 female thread for F10)
NP6 : Individual air supply spacer (with φ6 fitting for F15)
NP8 : Individual air supply spacer (with φ8 fitting for F15)
NRM : Individual exhaust spacer (with M5 female thread for F10)
NR6 : Individual exhaust spacer (with φ6 fitting for F15)
NR8 : Individual exhaust spacer (with φ8 fitting for F15)

Voltage
DC24V
DC12V

Manifold fitting specification[Note 4]
Can be selected in manifold outlet specification **L** (with selectable fittings)
J5 : Manifold side outlet port with single size fitting block **F10**: φ4, **F15**: φ6
J6 : Manifold side outlet port with single size fitting block **F10**: φ6, **F15**: φ8
M : Manifold side outlet port with female thread block **F10**: M5×0.8, **F15**: Rc1/8
J5A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: φ4, **F15**: φ6
J5B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: φ4, **F15**: φ6
J6A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: φ6, **F15**: φ8
J6B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: φ6, **F15**: φ8
MA : Manifold side outlet port with female thread block, 3-port normally closed (NC) **F10**: M5×0.8, **F15**: Rc1/8
MB : Manifold side outlet port with female thread block, 3-port normally open (NO) **F10**: M5×0.8, **F15**: Rc1/8

Enter ○ for each designated station in tables on the next page.

PC Board Manifold A Type

Specifications Confirmation Form 2/2

Mounting valve models

Wiring connection specifications are -S (for single wiring)

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
F□T0 2-position, for single solenoid only																	
F□T1 2-position, single solenoid specification																	
F□BPC Block-off plate																	
Manual override (**-R**) Manual override lever																	
Manifold fitting specification[Note 4] (Manifold side outlet port)	**J5** With single size fitting block																
	J6 With single size fitting block																
	M With female thread block																
	J5A With single size fitting block, 3-port normally closed (NC)																
	J5B With single size fitting block, 3-port normally open (NO)																
	J6A With single size fitting block, 3-port normally closed (NC)																
	J6B With single size fitting block, 3-port normally open (NO)																
	MA With female thread block, 3-port normally closed (NC)																
	MB With female thread block, 3-port normally open (NO)																
NPM Individual air supply spacer (with M5 female thread for F10)																	
NP6 Individual air supply spacer (with ϕ6 fitting for F15)																	
NP8 Individual air supply spacer (with ϕ8 fitting for F15)																	
NRM Individual exhaust spacer (with M5 female thread for F10)																	
NR6 Individual exhaust spacer (with ϕ6 fitting for F15)																	
NR8 Individual exhaust spacer (with ϕ8 fitting for F15)																	

Caution: Valve units can be selected from only the even-numbered units between 6 and 16.

Wiring connection specifications are -W (for double wiring)

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8
F□T0 2-position, for single solenoid only									
F□T1 2-position, single solenoid specification									
F□T2 2-position, double solenoid specification									
F□T3 3-position, closed center									
F□T4[Note 6] 3-position, exhaust center									
F□T5[Note 6] 3-position, pressure center									
F□BPC Block-off plate									
Manual override (**-R**) Manual override lever									
Manifold fitting specification[Note 4] (Manifold side outlet port)	**J5** With single size fitting block								
	J6 With single size fitting block								
	M With female thread block								
	J5A With single size fitting block, 3-port normally closed (NC)								
	J5B With single size fitting block, 3-port normally open (NO)								
	J6A With single size fitting block, 3-port normally closed (NC)								
	J6B With single size fitting block, 3-port normally open (NO)								
	MA With female thread block, 3-port normally closed (NC)								
	MB With female thread block, 3-port normally open (NO)								
NPM Individual air supply spacer (with M5 female thread for F10)									
NP6 Individual air supply spacer (with ϕ6 fitting for F15)									
NP8 Individual air supply spacer (with ϕ8 fitting for F15)									
NRM Individual exhaust spacer (with M5 female thread for F10)									
NR6 Individual exhaust spacer (with ϕ6 fitting for F15)									
NR8 Individual exhaust spacer (with ϕ8 fitting for F15)									

Caution: There should be either 6 or 8 valve units.

Notes: 1. Cannot be mounted on the external pilot manifold.
2. Cannot be mounted on the internal pilot manifold.
3. To designate a manual override lever, enter ○ in the manual override boxes of the designated stations in the above table.
4. When the manifold outlet specifications are **L** (with selectable fitting), select fitting specification for each station, and enter ○ in the manifold fitting specifications boxes of the above table. The 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
5. When mounting the individual air supply or exhaust spacer, enter ○ in the spacer boxes of the designated stations in the above table.
6. Not available with vacuum valves.

Quantity	set	Delivery

PC Board Manifold F Type

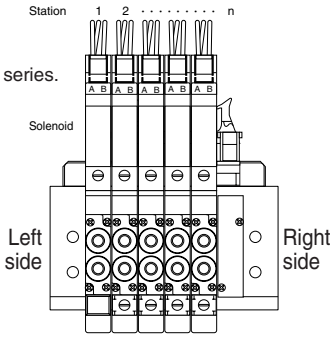
Specifications Confirmation Form 1/2

●Fill in selections inside the thick-lined boxes.

Order Date Month/ Day/ Year/

Company name	
Contact person	
Order No.	

This diagram shows the F10 series.



Manifold model

F□M□FP-□□-□

Valve size
10 : 10mm width
15 : 15mm width

Valve units
6～16
(only even-numbered units)

Wiring specification
F200
F201

Wiring connection specification
S : Single wiring
W : Double wiring

Caution: There should be 6 or 8 valve units, when the wiring connection specifications are **-W** (double wiring).

Mounting valve models

stn.□F Valve size **T** Valve specification **-** Note 1 **-** Note 2 **-PP-** Note 3 □

Voltage
DC24V
DC12V

Individual air supply and exhaust spacer Note 3
Blank : Without spacer
NPM : Individual air supply spacer (with M5 female thread for F10)
NP6 : Individual air supply spacer (with φ6 fitting for F15)
NP8 : Individual air supply spacer (with φ8 fitting for F15)
NRM : Individual exhaust spacer (with M5 female thread for F10)
NR6 : Individual exhaust spacer (with φ6 fitting for F15)
NR8 : Individual exhaust spacer (with φ8 fitting for F15)

Valve outlet type Note 2
FJ : With dual-use different size fitting block (**F10**: φ4, φ6, **F15**: φ6, φ8)
FJ5 : With single size fitting block (**F10**: φ4, **F15**: φ6)
FJ6 : With single size fitting block (**F10**: φ6, **F15**: φ8)
FM : With female thread block (**F10**:M5×0.8, **F15**:Rc1/8)
FJ5A : With single size fitting block, 3-port normally closed (NC) (**F10**: φ4, **F15**: φ6)
FJ5B : With single size fitting block, 3-port normally open (NO) (**F10**: φ4, **F15**: φ6)
FJ6A : With single size fitting block, 3-port normally closed (NC) (**F10**: φ6, **F15**: φ8)
FJ6B : With single size fitting block, 3-port normally open (NO) (**F10**: φ6, **F15**: φ8)
FMA : With female thread block, 3-port normally closed (NC) (**F10**:M5×0.8, **F15**:Rc1/8)
FMB : With female thread block, 3-port normally open (NO) (**F10**:M5×0.8, **F15**:Rc1/8)

Manual override
Blank : Manual override button
R : Manual override leverNote 1
(made to order)

Enter ○ for each designated station in tables on the next page.

PC Board Manifold F Type

Specifications Confirmation Form 2/2

Mounting valve models

Wiring connection specifications are -S (for single wiring)

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
F□T0 2-position, for single solenoid only																	
F□T1 2-position, single solenoid specification																	
F□BPC Block-off plate																	
Manual override (**-R**) Manual override lever																	
Valve outlet type[Note 2]	**FJ** With dual-use different size fitting block																
	FJ5 With single size fitting block																
	FJ6 With single size fitting block																
	FM With female thread block																
	FJ5A With single size fitting block, 3-port normally closed (NC)																
	FJ5B With single size fitting block, 3-port normally open (NO)																
	FJ6A With single size fitting block, 3-port normally closed (NC)																
	FJ6B With single size fitting block, 3-port normally open (NO)																
	FMA With female thread block, 3-port normally closed (NC)																
	FMB With female thread block, 3-port normally open (NO)																
NPM Individual air supply spacer (with M5 female thread for F10)																	
NP6 Individual air supply spacer (with ϕ6 fitting for F15)																	
NP8 Individual air supply spacer (with ϕ8 fitting for F15)																	
NRM Individual exhaust spacer (with M5 female thread for F10)																	
NR6 Individual exhaust spacer (with ϕ6 fitting for F15)																	
NR8 Individual exhaust spacer (with ϕ8 fitting for F15)																	

Caution: Valve units can be selected from only the even-numbered units between 6 and 16.

Wiring connection specifications are -W (for double wiring)

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8
F□T0 2-position, for single solenoid only									
F□T1 2-position, single solenoid specification									
F□T2 2-position, double solenoid specification									
F□T3 3-position, closed center									
F□T4 3-position, exhaust center									
F□T5 3-position, pressure center									
F□BPC Block-off plate									
Manual override (**-R**) Manual override lever									
Valve outlet type[Note 2]	**FJ** With dual-use different size fitting block								
	FJ5 With single size fitting block								
	FJ6 With single size fitting block								
	FM With female thread block								
	FJ5A With single size fitting block, 3-port normally closed (NC)								
	FJ5B With single size fitting block, 3-port normally open (NO)								
	FJ6A With single size fitting block, 3-port normally closed (NC)								
	FJ6B With single size fitting block, 3-port normally open (NO)								
	FMA With female thread block, 3-port normally closed (NC)								
	FMB With female thread block, 3-port normally open (NO)								
NPM Individual air supply spacer (with M5 female thread for F10)									
NP6 Individual air supply spacer (with ϕ6 fitting for F15)									
NP8 Individual air supply spacer (with ϕ8 fitting for F15)									
NRM Individual exhaust spacer (with M5 female thread for F10)									
NR6 Individual exhaust spacer (with ϕ6 fitting for F15)									
NR8 Individual exhaust spacer (with ϕ8 fitting for F15)									

Caution: There should be either 6 or 8 valve units.

Notes: 1. To designate a manual override lever, enter ○ in the manual override boxes of the designated stations in the above table.
2. Select fitting specification for each station, and enter ○ in the manifold fitting specifications boxes of the above table. The 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
3. When mounting the individual air supply or exhaust spacer, enter ○ in the spacer boxes of the designated stations in the above table.

Quantity	set	Delivery

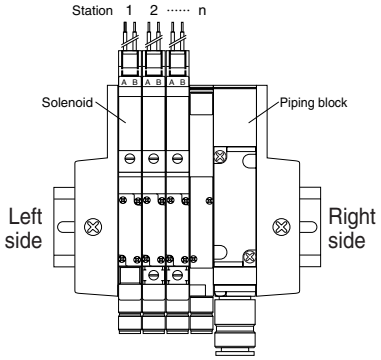
Split Manifold Non-Plug-in Type

Specifications Confirmation Form 1/2

●Fill in selections inside the thick-lined boxes.

Order Date Month/ Day/ Year/

Company name	
Contact person	
Order No.	



This diagram shows the F10 series.

Manifold model

F□M□N□□-□

Pilot specification
Blank : Internal pilot manifold
G : External pilot manifold

Manifold outlet specification
J : With dual-use different size fitting blocks
M : With female thread blocks
L : With selectable fittings
Blank : With plates (direct piping type)

Valve units
2～20

Valve size
10 : 10mm width
15 : 15mm width
18 : 18mm width

Piping block specification
JR : With dual-use different size fitting, right-side mounting
JL : With dual-use different size fitting, left-side mounting
JD : With dual-use different size fitting, both-side mounting
MR : With female thread, right-side mounting
ML : With female thread, left-side mounting
MD : With female thread, both-side mounting
J5R : With single size fitting φ8, right-side mounting (Not available for F18)
J6R : With single size fitting φ10, right-side mounting (Not available for F18)
J5L : With single size fitting φ8, left-side mounting (Not available for F18)
J6L : With single size fitting φ10, left-side mounting (Not available for F18)
J5D : With single size fitting φ8, both-side mounting (Not available for F18)
J6D : With single size fitting φ10, both-side mounting (Not available for F18)

Mounting valve models

stn.□F Valve size **T** Valve specification **□** - Note 3 - **A1** / Note 4 - □ - Note 5 - Note 6 - Note 7 □

When manifold outlet specifications are **J**, **M**, or **L**.

Operation type
Blank : Internal pilot type[Note 1]
G : External pilot type[Note 2]

Manual override
Blank : Manual override button
R : Manual override lever[Note 3] (made to order)

Voltage
DC24V
DC12V
AC100V

Port isolator
Blank : Without port isolator
SP : For 1(P) port[Note 7]
SR : For 3(R2), 5(R1) ports[Note 7]
SA : For 1(P), 3(R2), 5(R1) ports[Note 7]

Manifold fitting specification [Note 5]
Can be selected in manifold outlet specification **L** (with selectable fittings).
J5 : Manifold side outlet port with single size fitting block **F10**: φ4, **F15**: φ6, **F18**: φ8
J6 : Manifold side outlet port with single size fitting block **F10**: φ6, **F15**: φ8, **F18**: φ10
M : Manifold side outlet port with female thread block **F10**: M5×0.8, **F15**: Rc1/8, **F18**: Rc1/4
J5A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: φ4, **F15**: φ6
J5B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: φ4, **F15**: φ6
J6A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: φ6, **F15**: φ8
J6B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: φ6, **F15**: φ8
MA : Manifold side outlet port with female thread block, 3-port normally closed (NC) **F10**: M5×0.8, **F15**: Rc1/8
MB : Manifold side outlet port with female thread block, 3-port normally open (NO) **F10**: M5×0.8, **F15**: Rc1/8

Individual air supply and exhaust spacer[Note 6]
Blank : Without spacer
NPM : Individual air supply spacer (with M5 female thread for F10)
NP6 : Individual air supply spacer (with φ6 fitting for F15)
NP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
NP0 : Individual air supply spacer (with φ10 fitting for F18)
NRM : Individual exhaust spacer (with M5 female thread for F10)
NR6 : Individual exhaust spacer (with φ6 fitting for F15)
NR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
NR0 : Individual exhaust spacer (with φ10 fitting for F18)

Wiring specification
PN : S type plug connector, without connector
PS : S type plug connector, lead wire length 300mm [11.8in.]
PS3 : S type plug connector, lead wire length 3000mm [118in.]
CPS : Pre-wired positive common terminal S type plug connector, lead wire length 300mm [11.8in.]
CPS3 : Pre-wired positive common terminal S type plug connector, lead wire length 3000mm [118in.]

Valve outlet type
A1 : With plate (When manifold outlet specifications are **J**, **M**, or **L**, the valve type should be **A1**.)
FJ : With dual-use different size fitting block (Can be selected when manifold outlet specification is **"Blank"**, valve side outlet port has dual-use different size fittings **F10**: φ4 and φ6, **F15**: φ6 and φ8, **F18**: φ8 and φ10)[Note 4]
FJ5 : With single size fitting block (Can be selected when manifold outlet specification is **"Blank"**, valve side outlet port has single size fitting **F10**: φ4, **F15**: φ6, **F18**: φ8)[Note 4]
FJ6 : With single size fitting block (Can be selected when manifold outlet specification is **"Blank"**, valve side outlet port has single size fitting **F10**: φ6, **F15**: φ8, **F18**: φ10)[Note 4]
FM : With female thread block (Can be selected when manifold outlet specification is **"Blank"**, valve side outlet port has female thread **F10**:M5×0.8, **F15**:Rc1/8, **F18**:Rc1/4)[Note 4]
FJ5A : With single size fitting block, 3-port normally closed (NC) (Can be selected when manifold outlet specification is **"Blank"**, valve side outlet port has single size fitting **F10**: φ4, **F15**: φ6)[Note 4]
FJ5B : With single size fitting block, 3-port normally open (NO) (Can be selected when manifold outlet specification is **"Blank"**, valve side outlet port has single size fitting **F10**: φ4, **F15**: φ6)[Note 4]
FJ6A : With single size fitting block, 3-port normally closed (NC) (Can be selected when manifold outlet specification is **"Blank"**, valve side outlet port has single size fitting **F10**: φ6, **F15**: φ8)[Note 4]
FJ6B : With single size fitting block, 3-port normally open (NO) (Can be selected when manifold outlet specification is **"Blank"**, valve side outlet port has single size fitting **F10**: φ6, **F15**: φ8)[Note 4]
FMA : With female thread block, 3-port normally closed (NC) (Can be selected when manifold outlet specification is **"Blank"**, valve side outlet port has female thread **F10**:M5×0.8, **F15**:Rc1/8)[Note 4]
FMB : With female thread block, 3-port normally open (NO) (Can be selected when manifold outlet specification is **"Blank"**, valve side outlet port has female thread **F10**:M5×0.8, **F15**:Rc1/8)[Note 4]

Enter ○ for each designated station in the table on the next page.

Split Manifold Non-Plug-in Type

Specifications Confirmation Form 2/2

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve models

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
F□T0 2-position, for single solenoid only																					
F□T1 2-position, single solenoid specification																					
F□T2 2-position, double solenoid specification																					
F□T3 3-position, closed center																					
F□T4 3-position, exhaust center																					
F□T5 3-position, pressure center																					
F□BPN Block-off plate																					
Manual override (**-R**) Manual override lever																					
Valve outlet type[Note 4]	**FJ** With dual-use different size fitting block																				
	FJ5 With single size fitting block																				
	FJ6 With single size fitting block																				
	FM With female thread block																				
	FJ5A With single size fitting block, 3-port normally closed (NC)																				
	FJ5B With single size fitting block, 3-port normally open (NO)																				
	FJ6A With single size fitting block, 3-port normally closed (NC)																				
	FJ6B With single size fitting block, 3-port normally open (NO)																				
	FMA With female thread block, 3-port normally closed (NC)																				
	FMB With female thread block, 3-port normally open (NO)																				
Manifold fitting specification[Note 5] (Manifold side outlet port)	**J5** With single size fitting block																				
	J6 With single size fitting block																				
	M With female thread block																				
	J5A With single size fitting block, 3-port normally closed (NC)																				
	J5B With single size fitting block, 3-port normally open (NO)																				
	J6A With single size fitting block, 3-port normally closed (NC)																				
	J6B With single size fitting block, 3-port normally open (NO)																				
	MA With female thread block, 3-port normally closed (NC)																				
	MB With female thread block, 3-port normally open (NO)																				
Port isolator (**-SP**) For 1(P) port[Note 8]																					
Port isolator (**-SR**) For 3(R2), 5(R1) ports[Note 8]																					
Port isolator (**-SA**) For 1(P), 3(R2), 5(R1) ports[Note 8]																					
NPM Individual air supply spacer (with M5 female thread for F10)																					
NP6 Individual air supply spacer (with ϕ6 fitting for F15)																					
NP8 Individual air supply spacer (with ϕ8 fitting for F15 and F18)																					
NP0 Individual air supply spacer (with ϕ10 fitting for F18)																					
NRM Individual exhaust spacer (with M5 female thread for F10)																					
NR6 Individual exhaust spacer (with ϕ6 fitting for F15)																					
NR8 Individual exhaust spacer (with ϕ8 fitting for F15 and F18)																					
NR0 Individual exhaust spacer (with ϕ10 fitting for F18)																					

Notes : 1. Cannot be mounted on the external pilot manifold.
2. Cannot be mounted on the internal pilot manifold.
3. To designate a manual override lever, enter ○ in the manual override boxes of the designated stations in the above table.
4. When manifold outlet specifications are **"Blank,"** select fitting specification for each station, and enter ○ in the valve outlet type boxes of the above table. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
5. When the manifold outlet specifications are **L** (with selectable fitting), select manifold fitting specification for each station, and enter ○ in the manifold fitting specification boxes of the above table. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
6. When mounting the individual air supply or exhaust spacer, enter ○ in the spacer boxes of the designated stations in the above table.
7. To designate a port isolator, enter ○ in the port isolator boxes of the designated stations in the above table.
8. Port isolators can be installed only when piping blocks are mounted on both sides. In addition, only 1 port isolator can be mounted in 1 manifold for **-SA**, or 1 each port isolator for **-SP** and **-SR** for a total of 2 locations. When shipping, the designated port isolators are mounted between the designated station and the station to its immediate left (the next smaller stn. No.).

Quantity	set	Delivery

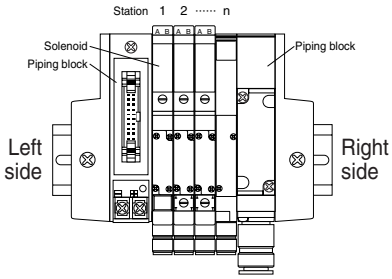
Split Manifold Plug-in Type

Specifications Confirmation Form 1/2

●Fill in selections inside the thick-lined boxes.

Order Date Month/ Day/ Year/

Company name	
Contact person	
Order No.	



This diagram shows the F 10 series, flat cable connector type.

Manifold model

F □ M □ P □ □ - □ - □ - □ - □ □

Voltage
DC24V
DC12V
AC100V Note 9

Wiring connection specification
Blank : Packed wiring
W : Double wiring

Wiring position（wiring block）
Blank : Left-side mounting
R : Right-side mounting

Piping block specification
JR : With dual-use different size fitting, right-side mounting
JL : With dual-use different size fitting, left-side mounting
JD : With dual-use different size fitting, both-side mounting
MR : With female thread, right-side mounting
ML : With female thread, left-side mounting
MD : With female thread, both-side mounting
J5R : With single size fitting φ8, right-side mounting (Not available for F18)
J6R : With single size fitting φ10, right-side mounting (Not available for F18)
J5L : With single size fitting φ8, left-side mounting (Not available for F18)
J6L : With single size fitting φ10, left-side mounting (Not available for F18)
J5D : With single size fitting φ8, both-side mounting (Not available for F18)
J6D : With single size fitting φ10, both-side mounting (Not available for F18)

Wiring specification
F100 : Flat cable connector 10-pin
F101 : Flat cable connector 10-pin
F200 : Flat cable connector 20-pin
F201 : Flat cable connector 20-pin
F260 : Flat cable connector 26-pin
D250 : D-sub connector 25-pin
D251 : D-sub connector 25-pin
T200 : Terminal block 19 terminals

Valve size
10 : 10mm width
15 : 15mm width
18 : 18mm width

Valve units
2～□Note

Note : For the maximum number of units, check the table for maximum number of valve units by wiring specification, on p.543.

Manifold outlet specification
J : With dual-use different size fitting blocks
M : With female thread blocks
L : With selectable fittings
Blank : With plates (direct piping type)

Pilot specification
Blank : Internal pilot manifold
G : External pilot manifold

Mounting valve models

When manifold outlet specifications are **J**, **M**, or **L**.

stn. □ F Valve size **T** Valve specification □ - Note 3 - **A1** / Note 4 - Note 5 - Note 6 - Note 7 □□

Operation type
Blank : Internal pilot typeNote 1
G : External pilot typeNote 2

Manual override
Blank : Manual override button
R : Manual override lever Note 3
(made to order)

Port isolator
Blank : Without port isolator
SP : For 1(P) portNote 7
SR : For 3(R2), 5(R1) portsNote 7
SA : For 1(P), 3(R2), 5(R1) ports Note 7

Voltage
DC24V
DC12V
AC100V Note 9

Individual air supply and exhaust spacer Note 6
Blank : Without spacer
PPM : Individual air supply spacer (with M5 female thread for F10)
PP6 : Individual air supply spacer (with φ6 fitting for F15)
PP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
PP0 : Individual air supply spacer (with φ10 fitting for F18)
PRM : Individual exhaust spacer (with M5 female thread for F10)
PR6 : Individual exhaust spacer (with φ6 fitting for F15)
PR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
PR0 : Individual exhaust spacer (with φ10 fitting for F18)

Manifold fitting specification Note 5
Can be selected in manifold outlet specification **L** (with selectable fitting).
J5 : Manifold side outlet port single size fitting block **F10**: φ4, **F15**: φ6, **F18**: φ8
J6 : Manifold side outlet port single size fitting block **F10**: φ6, **F15**: φ8, **F18**: φ10
M : Manifold side outlet port with female thread block **F10**: M5×0.8, **F15**: Rc1/8, **F18**: Rc1/4
J5A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: φ4, **F15**: φ6
J5B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: φ4, **F15**: φ6
J6A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: φ6, **F15**: φ8
J6B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: φ6, **F15**: φ8
MA : Manifold side outlet port with female thread block, 3-port normally closed (NC) **F10**: M5×0.8, **F15**: Rc1/8
MB : Manifold side outlet port with female thread block, 3-port normally open (NO) **F10**: M5×0.8, **F15**: Rc1/8

Valve outlet type
A1 : With plate (When manifold outlet specifications are **J**, **M**, or **L**, the valve outlet type should be **A1**.)
FJ : With dual-use different size fitting block (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has different size fittings **F10**: φ4, φ6, **F15**: φ6, φ8, **F18**: φ8, φ10)Note 4
FJ5 : With single size fitting block (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ4, **F15**: φ6, **F18**: φ8)Note 4
FJ6 : With single size fitting block (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ6, **F15**: φ8, **F18**: φ10)Note 4
FM : With female thread block (Can be selected when manifold outlet spec. is **"Blank"**, valve outlet port has female thread **F10**:M5×0.8, **F15**:Rc1/8, **F18**:Rc1/4)Note 4
FJ5A : With single size fitting block, 3-port normally closed (NC) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ4, **F15**: φ6)Note 4
FJ5B : With single size fitting block, 3-port normally open (NO) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ4, **F15**: φ6)Note 4
FJ6A : With single size fitting block, 3-port normally closed (NC) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ6, **F15**: φ8)Note 4
FJ6B : With single size fitting block, 3-port normally open (NO) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ6, **F15**: φ8)Note 4
FMA : With female thread block, 3-port normally closed (NC) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has female thread **F10**:M5×0.8, **F15**:Rc1/8)Note 4
FMB : With female thread block, 3-port normally open (NO) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has female thread **F10**:M5×0.8, **F15**:Rc1/8)Note 4

Enter ○ for each designated station in the table on the next page.

Split Manifold Plug-in Type

Specifications Confirmation Form 2/2

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve models

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
F□T0	2-position, for single solenoid only																				
F□T1	2-position, single solenoid specification																				
F□T2	2-position, double solenoid specification																				
F□T3	3-position, closed center																				
F□T4	3-position, exhaust center																				
F□T5	3-position, pressure center																				
F□BPP	Block-off plate																				
Manual override	(**-R**) Manual override lever																				
Valve outlet type[Note 4]	**FJ** With dual-use different size fitting block																				
	FJ5 With single size fitting block																				
	FJ6 With single size fitting block																				
	FM With female thread block																				
	FJ5A With single size fitting block, 3-port normally closed (NC)																				
	FJ5B With single size fitting block, 3-port normally open (NO)																				
	FJ6A With single size fitting block, 3-port normally closed (NC)																				
	FJ6B With single size fitting block, 3-port normally open (NO)																				
	FMA With female thread block, 3-port normally closed (NC)																				
	FMB With female thread block, 3-port normally open (NO)																				
Manifold fitting specification[Note 5] (Manifold side outlet port)	**J5** With single size fitting block																				
	J6 With single size fitting block																				
	M With female thread block																				
	J5A With single size fitting block, 3-port normally closed (NC)																				
	J5B With single size fitting block, 3-port normally open (NO)																				
	J6A With single size fitting block, 3-port normally closed (NC)																				
	J6B With single size fitting block, 3-port normally open (NO)																				
	MA With female thread block, 3-port normally closed (NC)																				
	MB With female thread block, 3-port normally open (NO)																				
Port isolator (**-SP**) For 1(P) port[Note 8]																					
Port isolator (**-SR**) For 3(R2), 5(R1) ports[Note 8]																					
Port isolator (**-SA**) For 1(P), 3(R2), 5(R1) ports[Note 8]																					
PPM	Individual air supply spacer (with M5 female thread for F10)																				
PP6	Individual air supply spacer (with ϕ6 fitting for F15)																				
PP8	Individual air supply spacer (with ϕ8 fitting for F15 and F18)																				
PP0	Individual air supply spacer (with ϕ10 fitting for F18)																				
PRM	Individual exhaust spacer (with M5 female thread for F10)																				
PR6	Individual exhaust spacer (with ϕ6 fitting for F15)																				
PR8	Individual exhaust spacer (with ϕ8 fitting for F15 and F18)																				
PR0	Individual exhaust spacer (with ϕ10 fitting for F18)																				

Notes : 1. Cannot be mounted on the external pilot manifold.
2. Cannot be mounted on the internal pilot manifold.
3. To designate a manual override lever, enter ○ in the manual override boxes of the designated stations in the above table.
4. When manifold outlet specifications are **"Blank,"** select fitting specification for each station, and enter ○ in the valve outlet type boxes of the above table. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
5. When the manifold outlet specifications are **L**(with selectable fitting), select manifold fitting specification for each station, and enter ○ in the manifold fitting specifications boxes of the above table. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
6. When mounting the individual air supply or exhaust spacer, enter ○ in the spacer boxes of the designated stations in the above table.
7. To designate a port isolator, enter ○ in the port isolator boxes of the designated stations in the above table.
8. Port isolators can be installed only when piping blocks are mounted on both sides. In addition, only 1 port isolator can be mounted in 1 manifold for **-SA**, or 1 each port isolator for **-SP** and **-SR** for a total of 2 locations. When shipping, the designated port isolators are mounted between the designated station and the station to its immediate left (the next smaller stn. No.).
9. AC100V can only be used when wiring specifications are **-D250**, **-D251** (D-sub connector), or **-T200** (terminal block).

Quantity	set	Delivery

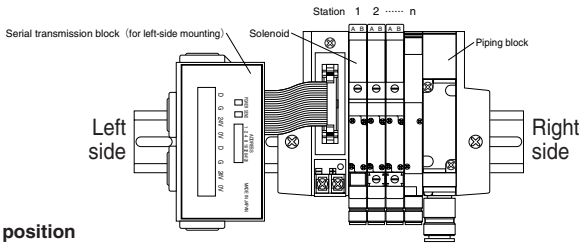
Serial Transmission Compatible Manifold

Specifications Confirmation Form 1/2

●Fill in selections inside the thick-lined boxes.

Order Date Month/ Day/ Year/

Company name	
Contact person	
Order No.	



This diagram shows the F10 series.

Note : The OMRON CompoBus/D can only be mounted on the left side.

Manifold model

F □M □S □□-□□-□□-□-□

Valve size
10 : 10mm width
15 : 15mm width
18 : 18mm width

Valve units
2～□Note

Note: To determine the maximum number of units, confirm the table for maximum number of valve units by transmission block specification, on p.547, 551.

Pilot specification
Blank : Internal pilot manifold
G : External pilot manifold

Manifold outlet specification
J : With dual-use different size fitting blocks
M : With female thread blocks
L : With selectable fittings
Blank : With plates (direct piping type)

Piping block specification
JR : With dual-use different size fitting, right-side mounting
JL : With dual-use different size fitting, left-side mounting
JD : With dual-use different size fitting, both-side mounting
MR : With female thread, right-side mounting
ML : With female thread, left-side mounting
MD : With female thread, both-side mounting
J5R : With single size fitting φ8, right-side mounting (Not available for F18)
J6R : With single size fitting φ10, right-side mounting (Not available for F18)
J5L : With single size fitting φ8, left-side mounting (Not available for F18)
J6L : With single size fitting φ10, left-side mounting (Not available for F18)
J5D : With single size fitting φ8, both-side mounting (Not available for F18)
J6D : With single size fitting φ10, both-side mounting (Not available for F18)

Wiring position (transmission block)
Blank : Left-side mounting
R : Right-side mounting Note

Wiring connection specification
Blank : Packed wiring
W : Double wiring

Transmission block specification
01 : For UNI-WIRE System (16 outputs)
02 : For UNI-WIRE System (8 outputs)
11 : For Mitsubishi Electric MELSECNET/MINI-S3
21 : For OMRON SYSBUS Wire System
31 : For OMRON B7A Link Terminal (Standard)
32 : For OMRON B7A Link Terminal (High speed)
41 : For KOYO ELECTRIC INDUSTRIES SA Bus (16 outputs)
42 : For KOYO ELECTRIC INDUSTRIES SA Bus (8 outputs)
51 : For SUNX S-LINK (16 outputs)
52 : For SUNX S-LINK (8 outputs)
61 : For Mitsubishi Electric MELSEC I/O LINK
71 : For Fuji Electric FA Components & Systems T Link Mini
81 : For KEYENCE KZ-R
91 : For OMRON CompoBus/D
A1 : For OMRON CompoBus/S (16 outputs)
A2 : For OMRON CompoBus/S (8 outputs)
B1 : For Mitsubishi Electric CC-Link

Mounting valve model

When manifold outlet specifications are **J**, **M**, or **L**.

stn. □F [Valve size] **T** [Valve specification] **□-** [Note 3] **-** [A1 / Note 4] **-** [Note 5] **-** [Note 6] **-** [Note 7] **DC24V**

Operation type
Blank : Internal pilot type Note 1
G : External pilot type Note 2

Manual override
Blank : Manual override button
R : Manual override lever Note 3 (made to order)

Port isolator
Blank : Without port isolator
SP : For 1(P) port Note 7
SR : For 3(R2), 5(R1) ports Note 7
SA : For 1(P), 3(R2), 5(R1) ports Note 7

Manifold fitting specification Note 5
Can be selected in manifold outlet specification **L** (with selectable fitting).
J5 : Manifold side outlet port with single size fitting block **F10**: φ4, **F15**: φ6, **F18**: φ8
J6 : Manifold side outlet port with single size fitting block **F10**: φ6, **F15**: φ8, **F18**: φ10
M : Manifold side outlet port with female thread block **F10**: M5×0.8, **F15**: Rc1/8, **F18**: Rc1/4
J5A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: φ4, **F15**: φ6
J5B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: φ4, **F15**: φ6
J6A : Manifold side outlet port with single size fitting block, 3-port normally closed (NC) **F10**: φ6, **F15**: φ8
J6B : Manifold side outlet port with single size fitting block, 3-port normally open (NO) **F10**: φ6, **F15**: φ8
MA : Manifold side outlet port with female thread block, 3-port normally closed (NC) **F10**: M5×0.8, **F15**: Rc1/8
MB : Manifold side outlet port with female thread block, 3-port normally open (NO) **F10**: M5×0.8, **F15**: Rc1/8

Individual air supply and exhaust spacer Note 6
Blank : Without spacer
PPM : Individual air supply spacer (with M5 female thread for F10)
PP6 : Individual air supply spacer (with φ6 fitting for F15)
PP8 : Individual air supply spacer (with φ8 fitting for F15 and F18)
PP0 : Individual air supply spacer (with φ10 fitting for F18)
PRM : Individual exhaust spacer (with M5 female thread for F10)
PR6 : Individual exhaust spacer (with φ6 fitting for F15)
PR8 : Individual exhaust spacer (with φ8 fitting for F15 and F18)
PR0 : Individual exhaust spacer (with φ10 fitting for F18)

Valve outlet type
A1 : With plate (When manifold outlet specifications are **J**, **M**, or **L**, the valve type should be **A1**.)
FJ : With dual-use different size fitting block (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has different size fittings **F10**: φ4, φ6, **F15**: φ6, φ8, **F18**: φ8, φ10) Note 4
FJ5 : With single size fitting block (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ4, **F15**: φ6, **F18**: φ8) Note 4
FJ6 : With single size fitting block (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ6, **F15**: φ8, **F18**: φ10) Note 4
FM : With female thread block (Can be selected when manifold outlet spec. is **"Blank"**, valve outlet port has female thread **F10**:M5×0.8, **F15**:Rc1/8, **F18**:Rc1/4) Note 4
FJ5A : With single size fitting block, 3-port normally closed (NC) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ4, **F15**: φ6) Note 4
FJ5B : With single size fitting block, 3-port normally open (NO) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ4, **F15**: φ6) Note 4
FJ6A : With single size fitting block, 3-port normally closed (NC) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ6, **F15**: φ8) Note 4
FJ6B : With single size fitting block, 3-port normally open (NO) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has single size fitting **F10**: φ6, **F15**: φ8) Note 4
FMA : With female thread block, 3-port normally closed (NC) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has female thread **F10**:M5×0.8, **F15**:Rc1/8) Note 4
FMB : With female thread block, 3-port normally open (NO) (Can be selected when manifold outlet spec. is **"Blank"**, valve side outlet port has female thread **F10**:M5×0.8, **F15**:Rc1/8) Note 4

Enter ○ for each designated station in the table on the next page.

Specifications Confirmation Form 2/2

※For specifying the valve and block-off plate to be mounted at each station, enter ○ for each applicable box below.

Mounting valve model

Mounting valve, block-off plate \ Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
F□T0	2-position, for single solenoid only																
F□T1	2-position, single solenoid specification																
F□T2	2-position, double solenoid specification																
F□T3	3-position, closed center																
F□T4	3-position, exhaust center																
F□T5	3-position, pressure center																
F□BPP	Block-off plate																
Manual override	(**-R**) Manual override lever																
Valve outlet type[Note 4]	**FJ** With dual-use different size fitting block																
	FJ5 With single size fitting block																
	FJ6 With single size fitting block																
	FM With female thread block																
	FJ5A With single size fitting block, 3-port normally closed (NC)																
	FJ5B With single size fitting block, 3-port normally open (NO)																
	FJ6A With single size fitting block, 3-port normally closed (NC)																
	FJ6B With single size fitting block, 3-port normally open (NO)																
	FMA With female thread block, 3-port normally closed (NC)																
	FMB With female thread block, 3-port normally open (NO)																
Manifold fitting specification[Note 5] (Manifold side outlet port)	**J5** With single size fitting block																
	J6 With single size fitting block																
	M With female thread block																
	J5A With single size fitting block, 3-port normally closed (NC)																
	J5B With single size fitting block, 3-port normally open (NO)																
	J6A With single size fitting block, 3-port normally closed (NC)																
	J6B With single size fitting block, 3-port normally open (NO)																
	MA With female thread block, 3-port normally closed (NC)																
	MB With female thread block, 3-port normally open (NO)																
Port isolator (**-SP**) For 1(P) port[Note 8]																	
Port isolator (**-SR**) For 3(R2), 5(R1) ports[Note 8]																	
Port isolator (**-SA**) For 1(P), 3(R2), 5(R1) ports[Note 8]																	
PPM	Individual air supply spacer (with M5 female thread for F10)																
PP6	Individual air supply spacer (with ϕ6 fitting for F15)																
PP8	Individual air supply spacer (with ϕ8 fitting for F15 and F18)																
PP0	Individual air supply spacer (with ϕ10 fitting for F18)																
PRM	Individual exhaust spacer (with M5 female thread for F10)																
PR6	Individual exhaust spacer (with ϕ6 fitting for F15)																
PR8	Individual exhaust spacer (with ϕ8 fitting for F15 and F18)																
PR0	Individual exhaust spacer (with ϕ10 fitting for F18)																

Notes : 1. Cannot be mounted on the external pilot manifold.
2. Cannot be mounted on the internal pilot manifold.
3. To designate a manual override lever, enter ○ in the manual override boxes of the designated stations in the above table.
4. When manifold outlet specifications are **"Blank,"** select fitting specification for each station, and enter ○ in the valve outlet type boxes of the above table. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
5. When the manifold outlet specifications are **L**(with selectable fitting), select manifold fitting specification for each station, and enter ○ in the manifold fitting specifications boxes of the above table. The 3-port specifications are for the **F10** and **F15** series only. In addition, the 3-port specifications are only available in valve specifications **T0**, **T1**, and **T2**.
6. When mounting the individual air supply or exhaust spacer, enter ○ in the spacer boxes of the designated stations in the above table.
7. To designate a port isolator, enter ○ in the port isolator boxes of the designated stations in the above table.
8. Port isolators can be installed only when piping blocks are mounted on both sides. In addition, only 1 port isolator can be mounted in 1 manifold for **-SA**, or 1 each port isolator for **-SP** and **-SR** for a total of 2 locations. When shipping, the designated port isolators are mounted between the designated station and the station to its immediate left (the next smaller stn. No.).

Quantity	set	Delivery