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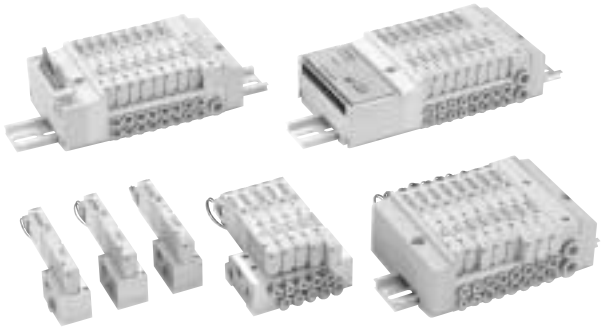
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CAD drawing data catalog is available.



KOGANEI

VALVES GENERAL CATALOG

SOLENOID VALVES JA SERIES

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⚠ Caution **Before use, be sure to read the "Safety Precautions" on p. 31.**

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We have achieved "Miniaturization" and "Low Power 3-port valves for high value-added new generation

New Valves for the New Century **Solenoid Valves JA Series**

Thin and compact

- Valve width of only 10.5 mm [0.41in.] achieves a thin and compact size valve, enabling space saving in equipment design.
- Effective area : 3.5mm² (Cv: 0.19)
  Suitable for operating up to ϕ 40 [1 1/2in.] bore size cylinders.

Low power consumption

- Standard: 0.5W (21mA at DC24V, 42mA at DC12V)
- Low current type: 0.25W (10.5mA current at DC24V) Note
  Note: When using power saving circuit
  (Starting current is 21mA.)

Negative common is available

- Positive or negative common is selectable on connector side using the same valve type.
  (Excluding serial transmission type)



Photo shows split type manifold plug-in type with flat cable and 20-pin connector with built-in muffler on exhaust port in the piping block.

Wide Product Range

Select from a choice of five types for customers' applications.



Sub-base



Monoblock Manifold Type



Split Manifold Non-Plug-in Type



Split Manifold Plug-in Type



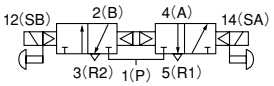
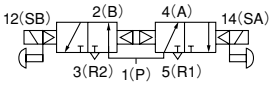
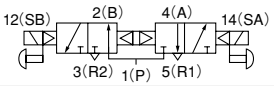
Serial Transmission Type

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Consumption" as well as the addition of Tandem valves.

Tandem 3-port, 4-position valve

- **Two 3-port valve functions in one valve body.**
- **The same 3-port valve operation with half the number of the current valves. Two 3-port valves can be operated independently in the same valve.**
- **3 valve types are available.**
  - **JA10□AA : Normally closed & Normally closed type**
  - **JA10□AB : Normally open & Normally open type**
  - **JA10□AC : Normally closed & Normally open type**
- **The same valve operation is possible as 3-position valve.**
  - **JA10□AA works as exhaust center valve**
  - **JA10□AB works as pressure center valve**

Model	4(A) side	2(B) side	Symbol
JA10□AA	Normally closed (NC)	Normally closed (NC)	
JA10□AB	Normally open (NO)	Normally open (NO)	
JA10□AC	Normally closed (NC)	Normally open (NO)	

Wire saving is possible

- **Common terminal pre-wired type** (available for monoblock manifold and split manifold non-plug-in type)
- **Flat cable connector and D-sub connector** (available for split manifold plug-in type)
- **Conforming to serial transmission** (Conforming to CC-Link, DeviceNet, and CompoBus/S)


Common terminal pre-wired plug connector


Flat cable connector on top surface[Note]


Flat cable connector on side surface[Note]


D-sub connector on top surface[Note]

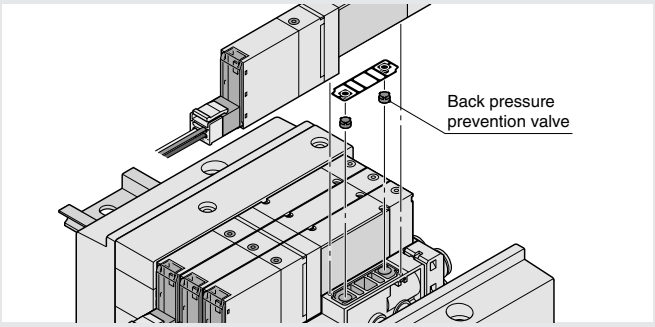

D-sub connector on side surface[Note]


Serial transmission type

Note: Connector mounting direction can be changed. But in the -D370U, D-sub connector on top surface is only available.

Back pressure prevention valve (optional)

This prevents erratic operation occuring from back pressure, in such as single acting cylinder applications.



Supply and exhaust piping block

You can select either quick fitting type or built-in muffler type for exhaust port except for monoblock type manifold.


With ϕ 8mm quick fitting type
With 1/4 inch quick fitting type
With 3/8 inch quick fitting type


Built-in muffler type

Individual air supply spacer (optional)

By installing dedicated air supply spacer between the manifold and the valve, individual air supply is possible.



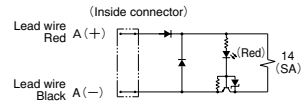
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Solenoid

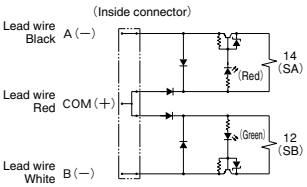
Internal circuit

●Positive common (DC24V, DC12V)

Single solenoid

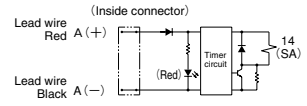


Double solenoid

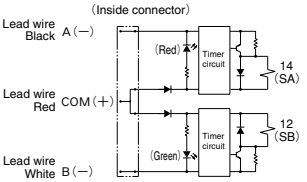


〈Low current type〉(DC24V)

Single solenoid

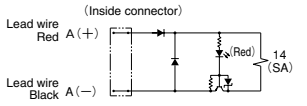


Double solenoid

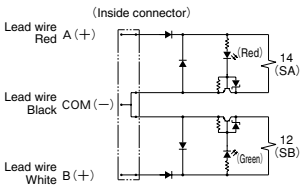


●Negative common (DC24V, DC12V)

Single solenoid

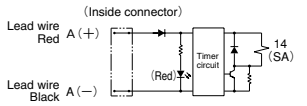


Double solenoid

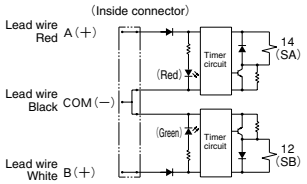


〈Low current type〉(DC24V)

Single solenoid



Double solenoid

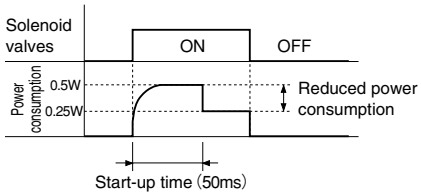


Cautions: **1.** Do not apply megger between the pins.
2. Leakage current inside the circuit could result in failure of the solenoid valve to return to the rest position or in other erratic operation. Always use it at less than the allowable leakage current shown in the solenoid specifications on p.213. If circuit conditions, etc. cause the leakage current to exceed the maximum allowable leakage current, consult us.
3. For the double solenoid specification, avoid energizing both solenoids simultaneously. (Excluding the tandem 3-port valve)
4. The standard housing type is colored blue, while the low current type is light blue.
5. The low current type will not activate if the power supply voltage is raised slowly. Always apply the appropriate voltage.

Operating principles of low current type

The low current type uses a timer circuit, as shown above, that achieves power savings by switching to holding operations mode after a certain period of time to operate at about 1/2 of the starting power consumption.

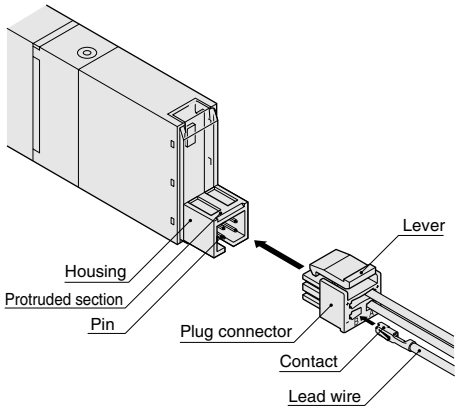
●Power waveform



Wiring instructions (When using as a single unit or 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 connector housing, and pull it out.



Caution: When removing the connector, confirm that the lever claw is completely disengaged from the protruded section before pulling out. The housing may be damaged if it is pulled out while engaging with the protruded section.

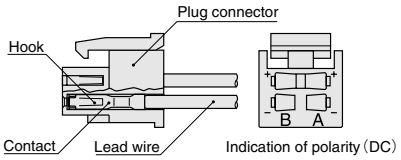
2. Attaching and removing plug connector and contact

●Attaching

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

●Removing

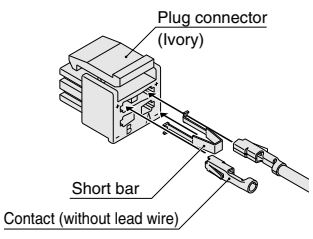
To remove it, insert a tool with a fine tip (such as a small screwdriver) into the rectangular hole on the side of the plug connector to push up on the hook, and then pull out the lead wire. When re-using the contacts, restore the hook back so that they spread outward.



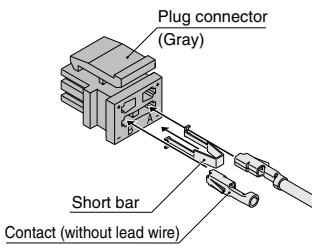
3. Common terminal and short bar

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

●For positive common



●For negative common

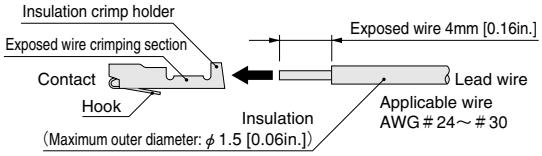


Caution: The plug connectors for positive common and negative common differ in shape.

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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.

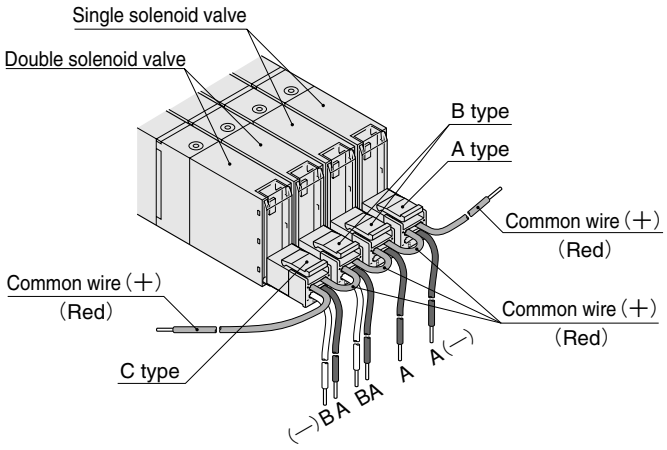


Cautions: **1.** Do not pull the lead wire too hard.
2. Always use a dedicated tool for crimping of connecting lead wire and contact.
Contact: Model 706312-2MK Manufactured by Sumiko Tech, Inc.
Crimping tool: Model F1 (For 706312-2MK) Manufactured by Sumiko Tech, Inc.

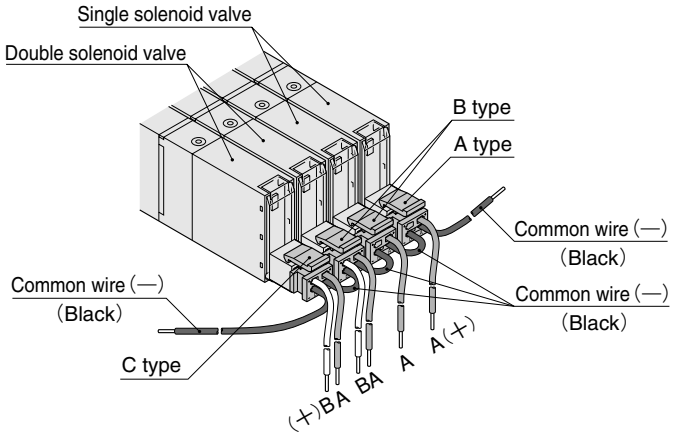
5. Common connector assembly for manifold

Using common connector assembly for the solenoid valve for manifold provides common wiring for all solenoid valves and greatly reduces wiring work.
The common connector types are determined by the location viewed from the lead wire side, the right end one is A type, the left end one is C type, and all others are B type. (See below)

●For positive common



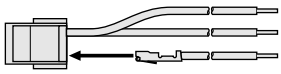
●For negative common



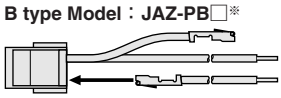
For common connector assembly, order the common connector assemblies listed below.

●For positive common

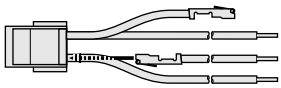
A type Model：JAZ-PA□※



B type Model：JAZ-PB□※



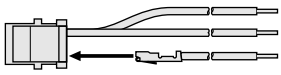
C type Model：JAZ-PC□※



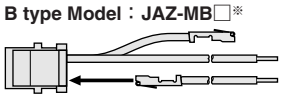
※Lead wire length **Blank** : 300mm[11.8in.]
3 : 3000mm[118in.]

●For negative common

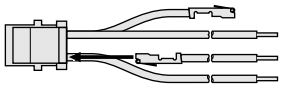
A type Model：JAZ-MA□※



B type Model：JAZ-MB□※



C type Model：JAZ-MC□※

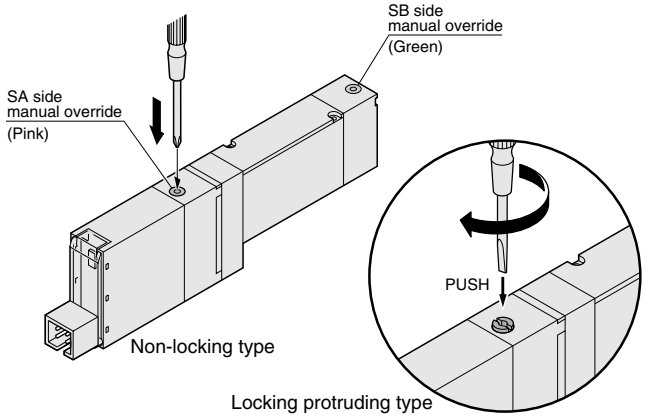


※Lead wire length **Blank** : 300mm[11.8in.]
3 : 3000mm[118in.]

Manual override

Manual override (Blank: Non-locking type, -83: Locking protruding type)

To lock the locking protruding type, use a small screwdriver to push down on the manual override all the way and turn it clockwise 90 degrees. When locked, turning the manual override 90 degrees in the counterclockwise direction releases a spring on the manual override, returns it to the original position, and releases the lock. When the manual override is not turned, this type acts just like the non-locking type, like the valve energizing status as long as the manual override is pushed down, and returning to the rest position upon release.



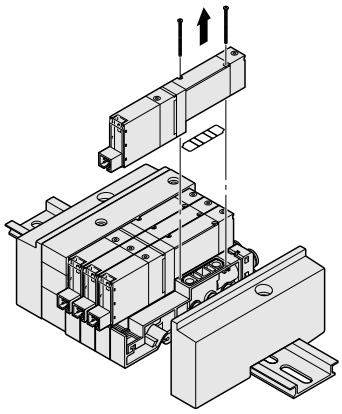
Cautions: **1.** The JA series valves are pilot type solenoid valves. As a result, the manual override cannot switch the main valve without air supplied from the 1(P) port.
2. Always release the lock on the locking protruding type manual overrides before commencing normal operation.
3. Do not attempt to operate the manual override with a pin or other object having an extremely fine tip. It could damage the manual override button.

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Manifold

Installing and removing valves

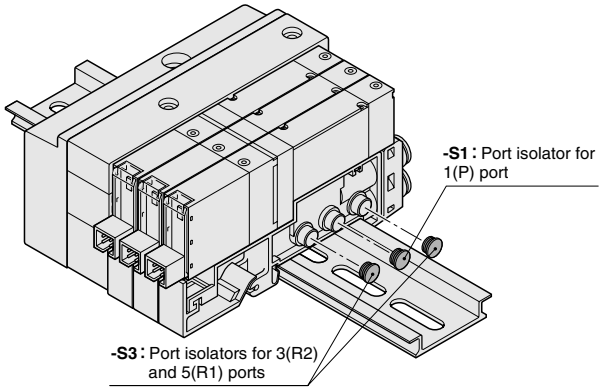
To remove the valve body from the sub-base or manifold, loosen the valve mounting screws (2 places), and pull the valve straight out in the direction of the arrow (see illustration to the right). For mounting, perform the same procedure in reverse. The recommended tightening torque for the valve mounting screw is 17.6N·cm {1.8kgf·cm} [1.56in·lbf].



Port isolator

In the split manifold, inserting port isolators into the 1(P), 3(R2), and 5(R1) ports between each of the stations isolates the air path between stations equipped with port isolators and stations with smaller station numbers. Care should be taken, however, that a piping block must be placed on both ends.

- Port isolator for 1(P) port (Model: **JAZ-S1**) — Can supply two different pressures.
- Port isolator for 3(R2) and 5(R1) ports (Model: **JAZ-S3**) — Can isolate exhaust air. (prevents exhaust interference)
- Port isolator for 1(P), 3(R2) and 5(R1) ports (Model: **JAZ-SA**) — Can supply two different pressures, and can isolate exhaust air. (prevents exhaust interference)

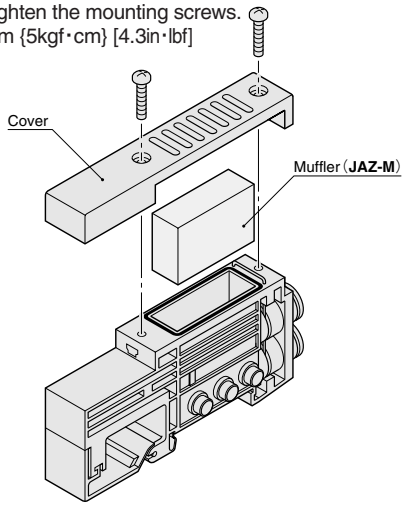


Caution: Mounting port isolators requires disassembly and re-assembly of manifolds. See the disassembly diagram, unit adding procedure, and cautions on p.181 ~183.

Replacement of muffler

When using a piping block with built-in muffler, follow the below procedure to replace the muffler. (Muffler single unit model: **JAZ-M**)

① Remove the mounting screws (2 pcs.) holding the cover on top of the piping block.
② Remove the muffler to be replaced.
③ Insert the new muffler so that it reaches the bottom of the groove.
④ Reinstall the cover, and tighten the mounting screws.
Tightening torque: 49N·cm {5kgf·cm} [4.3in·lbf]

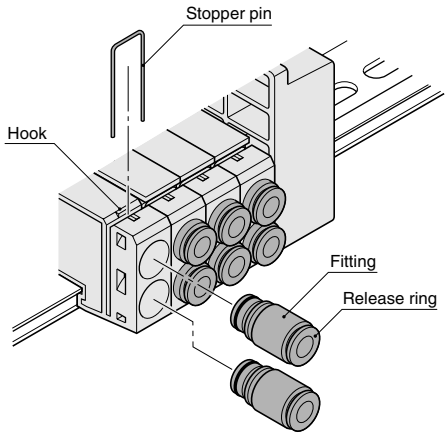


Fittings

Replacement of fittings

1. Replacement of delivery port fittings for monoblock manifolds
Remove the fitting to be replaced, attach a gasket to the new fitting, and tighten.
Tightening torque:196N·cm{20kgf·cm} [17.3in·lbf] (Fitting single unit model: **JAZ-J4K**, **JAZ-J6K**)

2. Replacement of delivery port fittings for split manifolds
① Loosen the mounting screws of the valve for the fitting to be replaced, and remove the valve.
② Use a flatblade screwdriver (blade width 2mm [0.08in.]) to remove the stopper pin holding the fitting to the valve base from the valve base hook, and pull it out.
③ Remove the fitting to be replaced, and push in and attach the new fitting as far as it will go.
④ Push in the stopper pin until it hooks onto the valve base.
⑤ Mount the valve back into place.
Note: Ensure that the fitting and the stopper pin mounting in place are firmly secured.
(Fitting single unit model: **JAZ-J4**, **JAZ-J6, JAZ-J1/8, JAZ-J1/4**)



Tube

1. Attaching and removing tubes

For tube connection, insert an appropriate size tube unitl it comes into contact with the tube stopper, and lightly pull it to check the connection.
For tube removal, push the tube against the tube stopper, then push the release ring and at the same time pull the tube out.

2. Either a nylon tube 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 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 the outer surfaces. If a scratch occurs during repeated use, cut off the scratched section.
3. Do not bend the tube excessively near the fittings.The minimum bending radius for nylon tubes 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 bending radius
ϕ 4[0.157in.]	20 [0.8]
ϕ 6[0.236in.]	30 [1.2]
ϕ 8[0.315in.]	50 [2.0]
1/8 in.	20 [0.8]
1/4 in.	30 [1.2]
3/8 in.	50 [2.0]

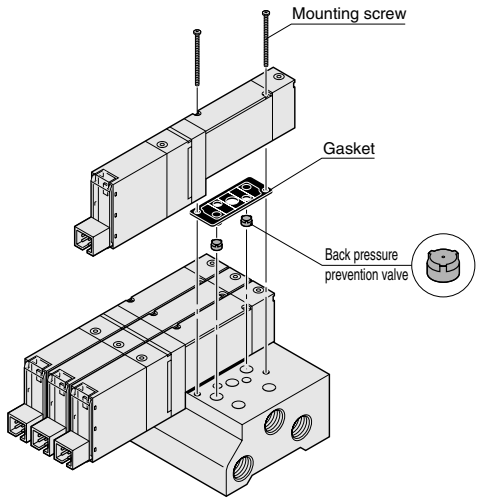
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Precautions for use of back pressure prevention valve

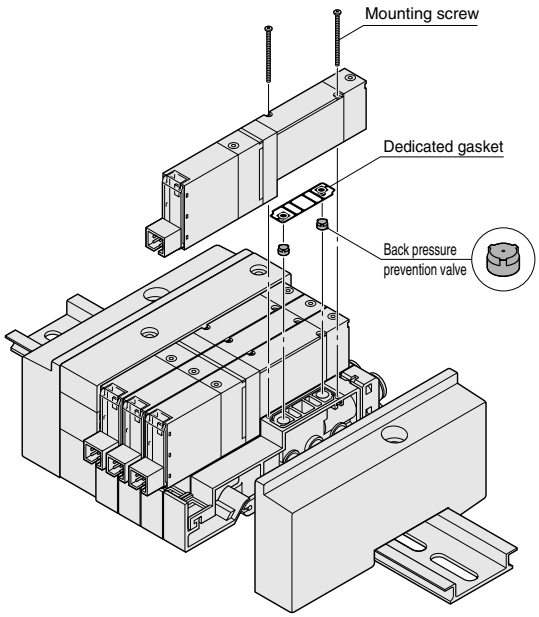
Mounting the back pressure prevention valve on the manifold enables users to prevent erratic cylinder operation due to exhaust from other valves. This is particularly effective when using single acting cylinders or exhaust center valves. Care should be taken, however, that the effective OUT-EXH area is reduced to 2.5mm² 〔Cv:0.14〕 when using the back pressure prevention valve. In addition, do not let the manifold's exhaust port throttle the exhaust air, since the back pressure prevention valve allows leaks in back pressure. When mounting additional back pressure prevention valves to existing units, observe the following items:

① Loosen the valve mounting screws used to install the back pressure prevention valve, and remove the valve.

② For the monoblock manifold, temporarily remove the gasket from between the valve and manifold, insert the back pressure prevention valve into the exhaust port, place the gasket, and then mount the valve.



For the split type manifold, remove the gasket from between the valve and manifold, insert the back pressure prevention valve into the exhaust port, mount the dedicated gasket provided, and then install the valve.



Tightening torque of mounting screw : 17.6N·cm {1.8kgf·cm} [1.56in·lbf]
〔Back pressure prevention valve single unit model: **JAZ-E1** (for monoblock type), **JAZ-E2** (for split type)〕

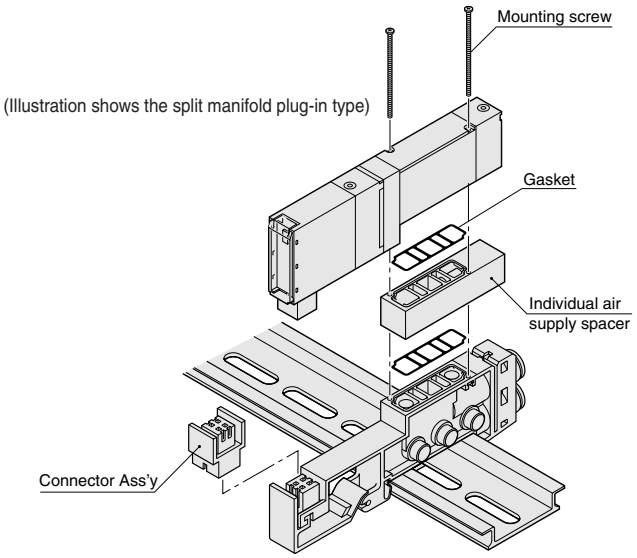
Precautions for use of individual air supply spacer

By mounting an individual air supply spacer on the manifold, air supply can be provided individually on the unit. Care should be taken that when spacers are used, the effective area is reduced by about 20%. When mounting additional spacers to existing units, observe the following items.

●Procedure for mounting spacers

① Loosen the valve mounting screws for the added individual air supply spacer, and remove the valve.

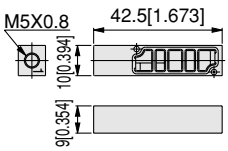
② Install the gaskets provided with the individual air supply spacer, and use the mounting screws provided to mount the valve and spacer on the manifold. (See below)
For plug-in type, also install the provided connector Ass'y. Tightening torque of the mounting screw: 17.6N·cm {1.8kgf·cm} [1.56in·lbf]
(Individual air supply spacer single unit model: **JAZ-NPM**, **JAZ-PPM**)



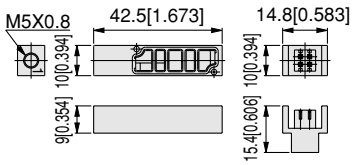
Remark: When attaching fittings to the Individual air supply spacer, use the recommended fittings shown below.
TSH4-M5M, TSH4-M5, TSH6-M5M, TS4-M50, TS4-M5M
However, only the TSH4-M5M can be attached to JA10A7, A8, and A9 (3-position valve).

●Dimensions mm [in.]

For non-plug-in type
JAZ-NPM

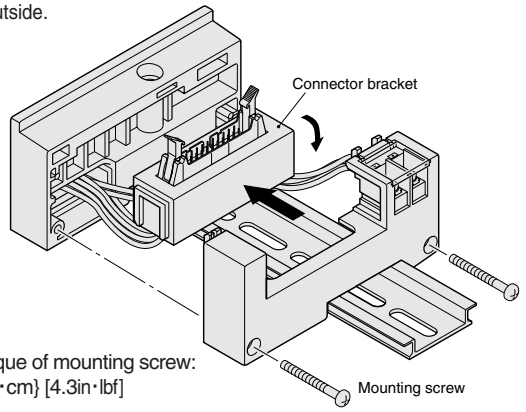


For plug-in type
JAZ-PPM Connector Ass'y



Changing the direction of the connector bracket

Change the connector from upward facing to side facing by removing the wiring block mounting screws, setting the connector bracket in the position shown in the illustration, and then turning the connector 90 degrees so that it faces to the outside.

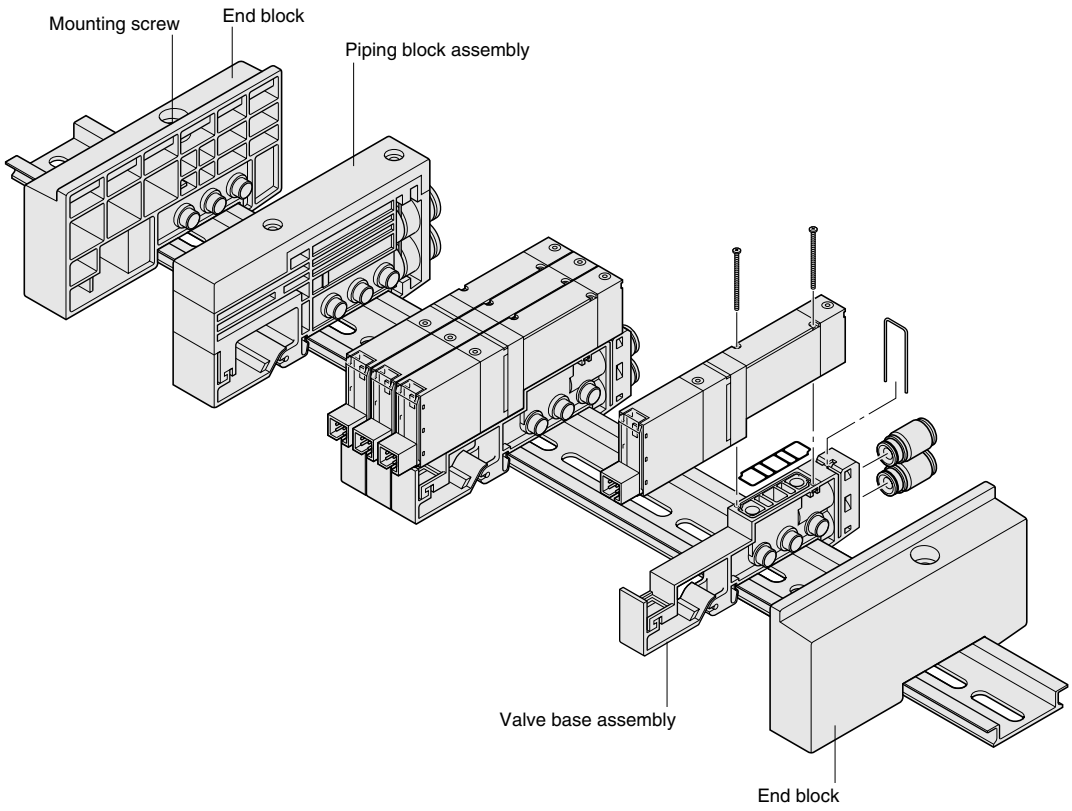


Tightening torque of mounting screw:
49N·cm {5kgf·cm} [4.3in·lbf]

Caution: The direction of the -D370U connector cannot be changed, D-sub on top is the only option.

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Figure 1



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

■Adding 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).
② Disconnect the link between the valve base assembly's bases where the new unit is to be added.
③ Mount the valve base assembly to be added on the DIN rail shown in Fig. 2.
④ 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. 3).
Tightening torque: 147N·cm {15kgf·cm} [13in·lbf]

Note: Confirm that the DIN rail mounting bracket hooks secure the DIN rail (see Fig. 3).

Figure 2

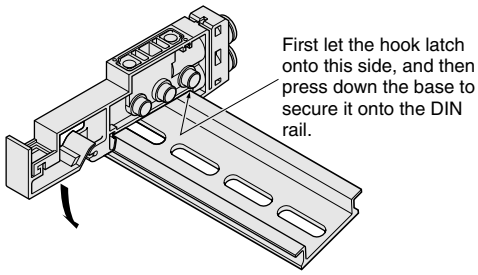
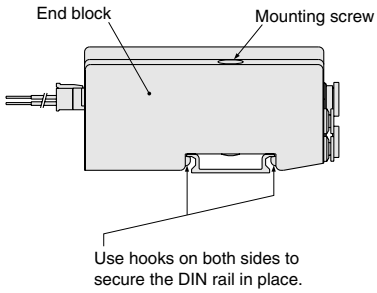


Figure 3



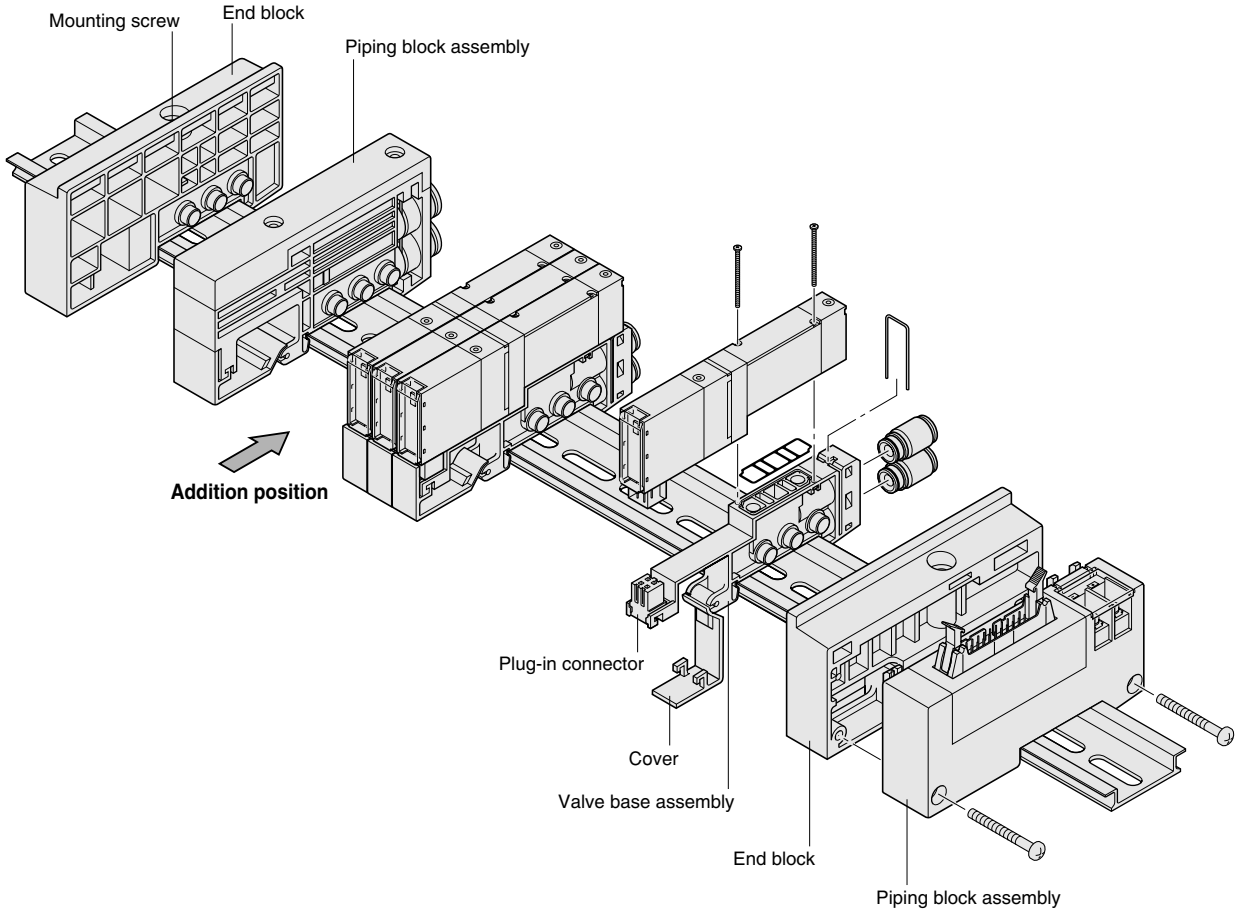
【Caution】

- 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 not to become trapped or lose gaskets.
- Before supplying air to the manifold, always confirm that the bases are connected and 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 separate 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 two air supplies and exhausts (on each side).

Adding units of the piping block assembly is performed in the same way as adding units of the valve base assembly.

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Figure 1



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

■Adding valve base unit

Use the valve base assembly for adding manifold units.

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

② Add units on the side shown in Fig. 1 (with the solenoid on top and the right). Disconnect the link between the bases where the new unit is to be added.

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

④ 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. 3).
Tightening torque: 147N·cm {15kgf·cm} [13in·lbf].

Note: Confirm that the DIN rail mounting bracket hooks secure the DIN rail (see Fig. 3).

Figure 2

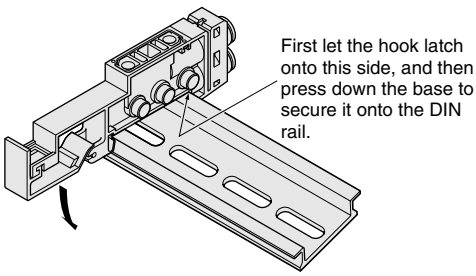
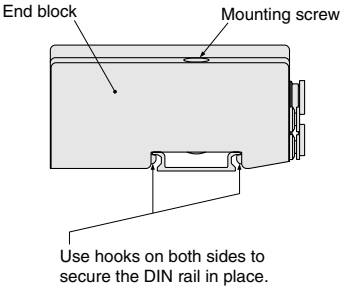


Figure 3



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■Wiring Procedure (for positive common)

① Press down the upper part of the cover, and open it. Loosen the mounting screws of the valves next to the valve base assemblies to be added, remove the valves, and remove the plug-in connector (see Fig. 4).

② The end terminal lead wire (short, red wire) is inserted into the pin insert section (No.4) of the plug-in connectors that were removed in step ① (see Fig. 5).
(When shipping, the 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 insertion section (No. 4) of the plug-in connector of the valve base assembly to be added. Afterward, insert the common wire (red) of this plug-in connector into the insertion section (No.4) 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 insertion 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 them in the positions shown in Fig. 7, then connect the lead wire (white) of the added valve base after confirming the pin location (For details, see the detailed diagram of the wiring block internal connections on p.184).

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

■Wiring Procedure (for negative common)

① Press down the upper part of the cover, and open it. Loosen the mounting screws of the valves next to the valve base assemblies to be added, remove the valves, and remove the plug-in connectors (see Fig. 4).

② The end terminal lead wire (short, black wire) is inserted into the pin insert section (No.3) of the plug-in connectors that were removed in step ① (see Fig. 6).
(When shipping, the 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 insertion section (No.3) of the plug-in connector for the valve base assembly to be added. Afterward, insert the common wire (black) of this plug-in connector into the insertion 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 insertion 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 them in the positions shown in Fig. 7, then connect the lead wire (white) of the added valve base after confirming the pin location (For details, see the detailed diagram of the wiring block internal connections on p.184).

⑤ Return the connector brackets to their original position, and tighten the wiring block mounting screws in place, 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 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 Figs. 5 and 6)
- Care should be taken not to become trapped or lose gaskets.
- Before supplying air to the manifold, always confirm that the bases are connected, and that the end block mounting screws are tightened, etc.
  Supplying air when either of the end blocks do not secure the DIN rail could result in air leaks or separate manifold bases.
- Be aware that the number of valve units that can be added is limited in the manifold, by the wiring specifications and wiring connection type, etc.
- When there are large number of valves simultaneously delivering air to the secondary side, or when there is a large number of valves overall, we recommend using two air supplies and exhausts (on each side).

Adding units of the piping block assembly is performed in the same way as adding units of the valve base assembly.

- When the wiring specification is -D370U and adding units is required, consult us.

Figure 4

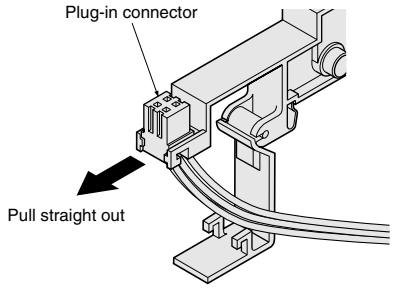
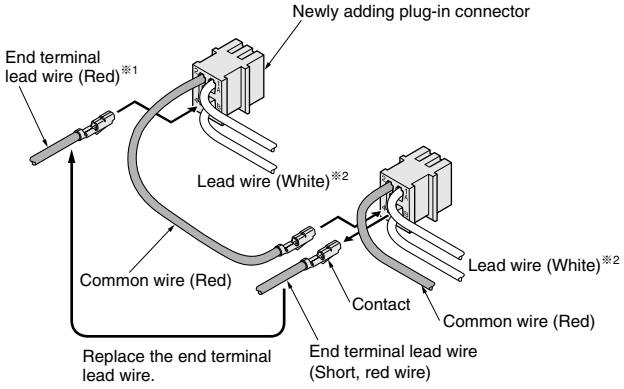
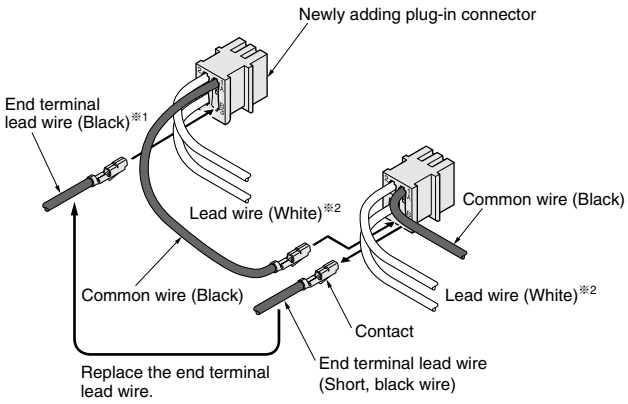


Figure 5 ●For positive common



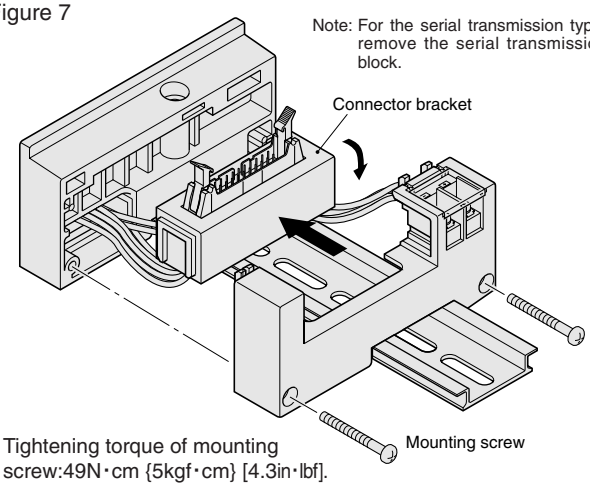
※1: Always insert the end terminal lead wire.
※2: Shows when both A and B are used.

Figure 6 ●For negative common



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

Figure 7

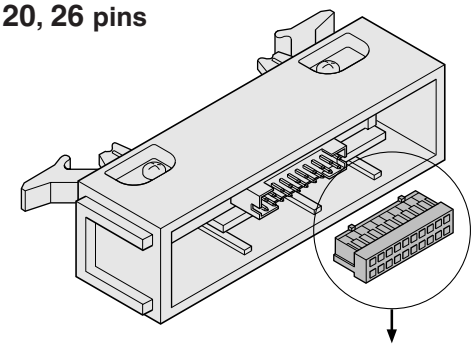


Tightening torque of mounting screw:49N·cm {5kgf·cm} [4.3in·lbf].

See "Detailed Diagram of Wiring Block Internal Connections" on p.184.

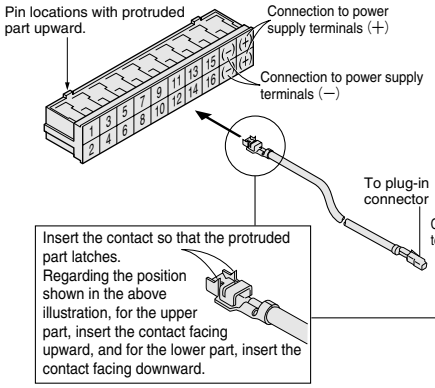
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Flat cable connector 20, 26 pins

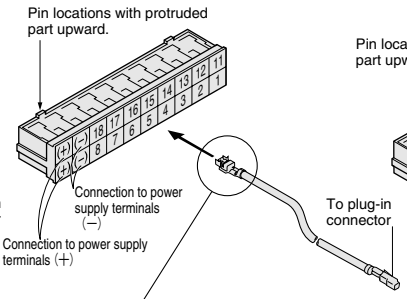


Note: As shown on the left, remove the connector and then perform the wiring.

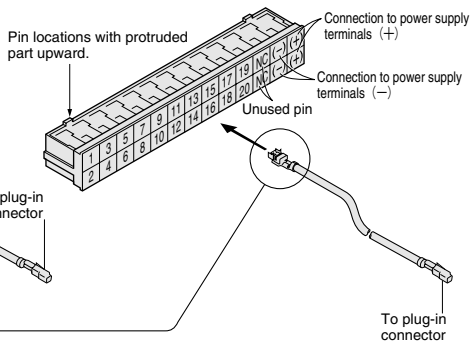
●For -F200□



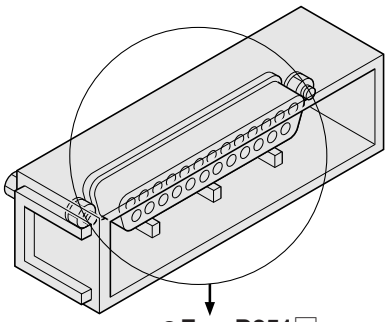
●For -F201□



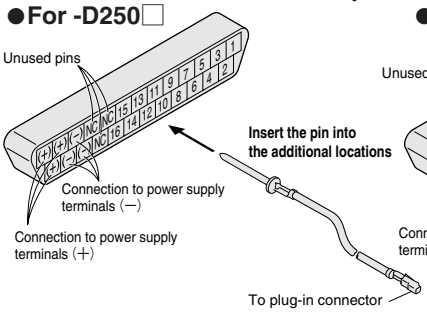
●For -F260□



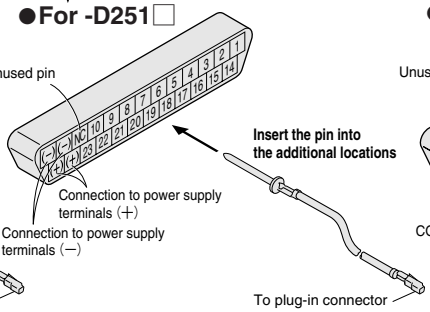
D-sub connector



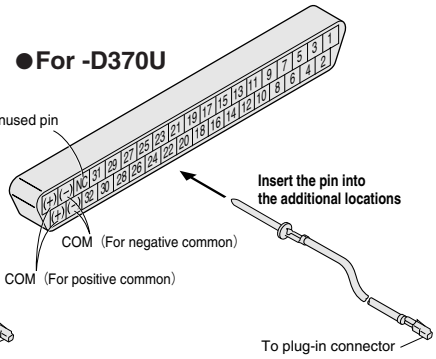
●For -D250□



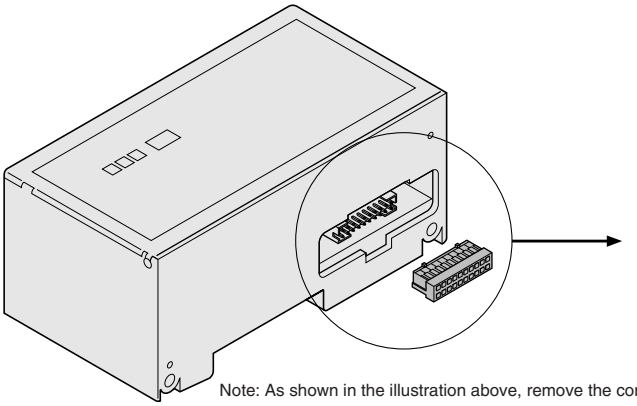
●For -D251□

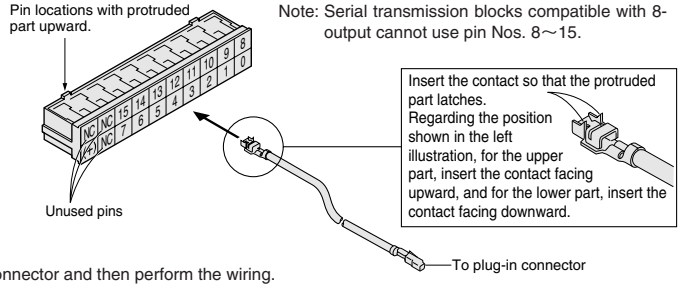


●For -D370U



Serial transmission block





Note: Serial transmission blocks compatible with 8-output cannot use pin Nos. 8～15.

Note: As shown in the illustration above, remove the connector and then perform the wiring.

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Serial Transmission Block Specifications

General Specifications

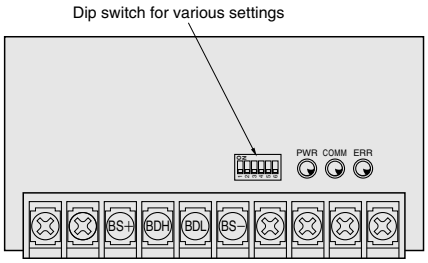
Voltage	DC24V ±10%
Operating temperature range	5～50°C [41～122°F]
Vibration resistance	49.0m/s² {5.0G} (Conforms to JIS C 0911)
Shock resistance	98.1m/s² {10.0G} (Conforms to JIS C 0912)

●For details of specifications, see the user's manual. (See below)

Serial Transmission Block and Terminal Block (LED) Part Names

●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
	Shut off		•Power is not supplied
COMM	Lights up	Yellow	•During normal communication
	Shut off		•Communication fault, or standby
ERR	Lights up	Red	•Communication fault occurred
	Shut off		•During normal communication, or standby

Remarks

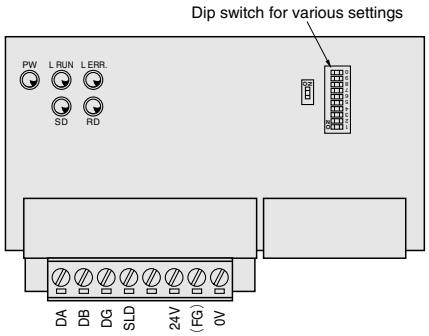
※ For details about CompoBus/S, see the OMRON catalog, user's manual, etc.

● **Number of outputs per block**
16 solenoids (transmission block specification: **-A1**)
8 solenoids (transmission block specification: **-A2**)

● **Related materials: User's manual, document No.HV030**

●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 a 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 during a station number setting error or transmission speed setting error

Remarks

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

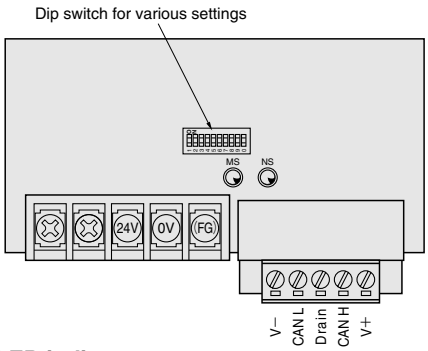
● **Number of outputs per block**
16 solenoids (transmission block specification: **-B1**)

※ Since the block occupies one station, if the block is entirely composed of remote I/O stations, a maximum of 64 units can be connected to one master station.

● **Related materials: User's manual, document No.HV031**

●For DeviceNet (OMRON CompoBus/D)

Transmission block specification: -D1



LED indicator

Indicator	State	color	Description
MS	Lights up	Green	•Normal status
	Flashing		•No setting status
	Lights up	Red	•Serious breakdown
	Flashing		•Minor breakdown
	Shut off	—	•No power supply
NS	Lights up	Green	•Communication connection achieved
	Flashing		•No communication connection
	Lights up	Red	•Serious communication fault
	Flashing		•Minor communication fault
	Shut off	—	•No power supply

Remarks

※ Conforms to DeviceNet (CompoBus/D)

● **Number of outputs per block**
Maximum of 16 solenoids

● **Related materials: User's manual, document No.HV032**

■For details about specifications and handling, see the above-listed user's manuals (Document **No. HV030～HV032**).

■Application Examples for Serial Transmission Block of General Purpose Type

If manifolds with flat cable connectors released previously have F201 wiring specifications (with positive common specifications only), the serial transmission blocks (general purpose type with F201 compatible flat cable) **YS5□U** can be connected to the manifold to convert it into a serial transmission-compatible manifold.



●**Connectable Manifolds**

- **FM-SOLID MANIFOLD X80M, X88M Series**
- **Koganei Solenoid Valves F series**
- **Koganei Solenoid Valves JA series**

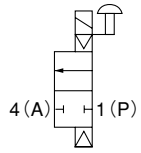
※ Voltage should meet DC24V specifications.

(Flat cable length approximately 90mm [3.5in.], DIN rail length 75mm [3in.])

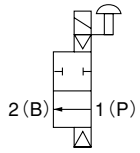
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2-port

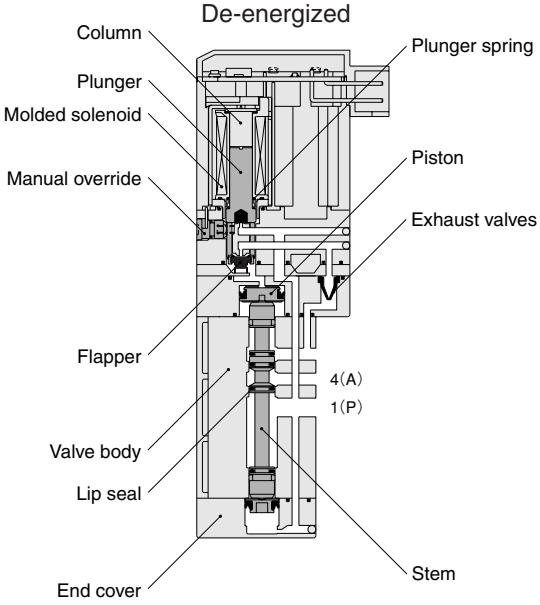
Normally closed (NC)



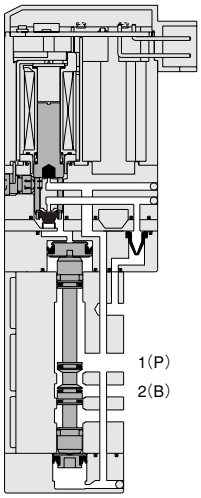
Normally open (NO)



JA10A1
De-energized



JA10A2
De-energized

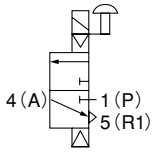


Major Parts and Materials

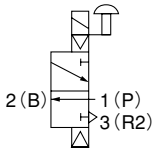
Parts			Materials
Valve	Body		Aluminum alloy (anodized)
	Stem		Aluminum alloy
	Exhaust valve		Synthetic rubber
	Lip seal		
	Flapper		
	Sub-base		Aluminum alloy (anodized)
	Plunger		Magnetic stainless steel
	Column		
	End cover		Plastic
Manifold	Body	Monoblock	Aluminum alloy (anodized)
		Split type	Plastic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

3-port

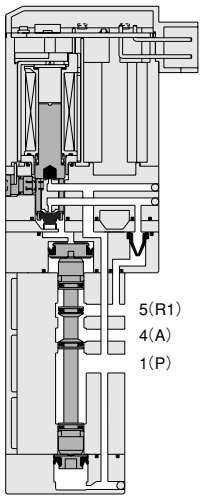
Normally closed (NC)



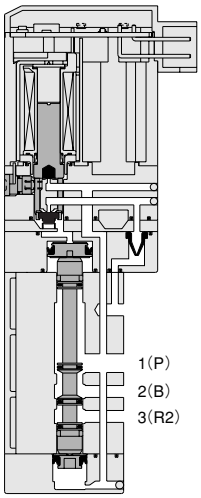
Normally open (NO)



JA10A3
De-energized

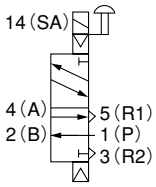


JA10A4
De-energized

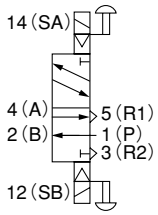


5-port, 2-position

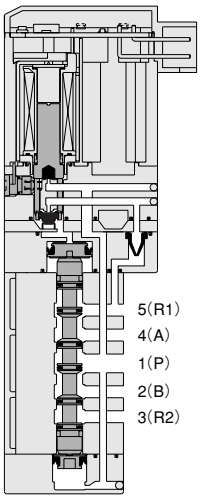
Single solenoid



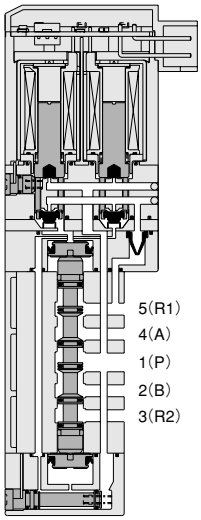
Double solenoid



JA10A5
De-energized



JA10A6
De-energized condition after energizing solenoid 12(SB)

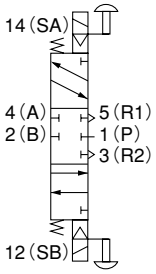


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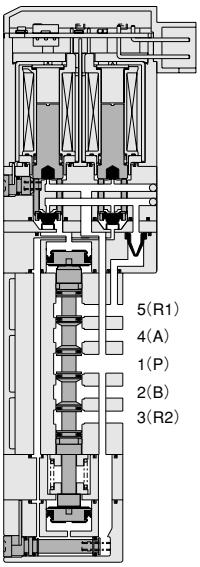
5-port, 3-position

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

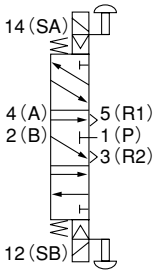
Closed center



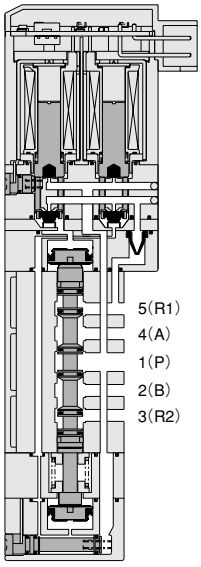
JA10A7



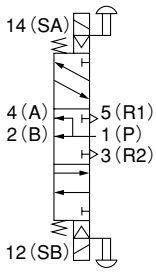
Exhaust center



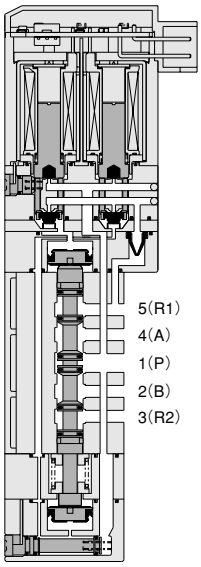
JA10A8



Pressure center



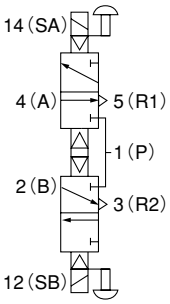
JA10A9



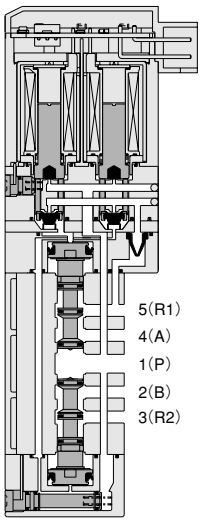
Tandem 3-port, 4-position

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

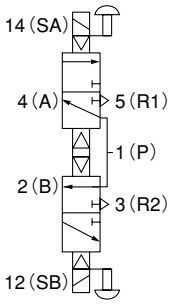
Normally closed (NC), Normally closed (NC)



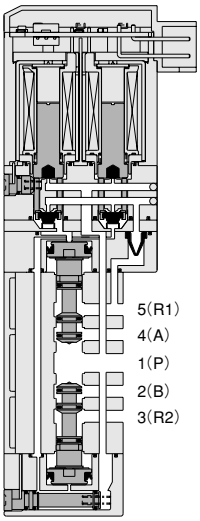
JA10AA



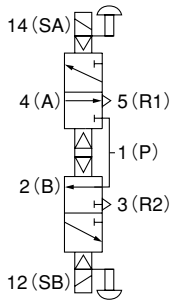
Normally open (NO), Normally open (NO)



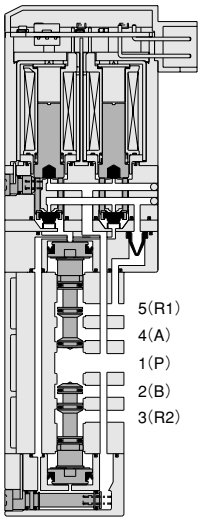
JA10AB



Normally closed (NC), Normally open (NO)



JA10AC



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JA Series Order Codes

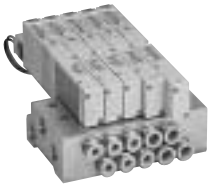
The Solenoid Valves JA series order codes are classified into the following 5 categories.
For details of order codes, see the designated pages.

JA10A□ : **Single valve unit**



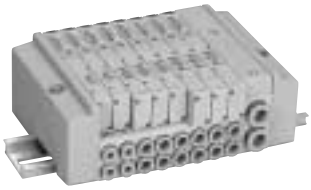
p. 189

JAM□AJ : **Monoblock manifold**



p. 191

JAM□NJ : **Split manifold non-plug-in type**



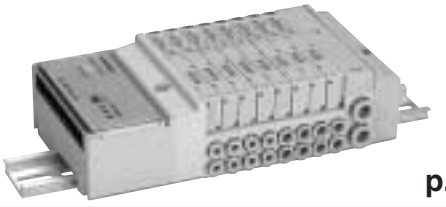
p. 193

JAM□PJ : **Split manifold plug-in type**



p. 197

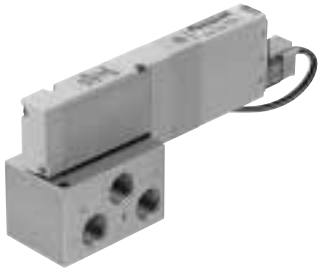
JAM□SJ : **Serial transmission type**



p. 201

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Single Valve Unit Order Codes



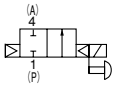
Model

JA10
Standard type

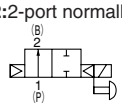
JA10L
Low current type

Valve specification

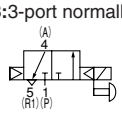
A1:2-port normally closed



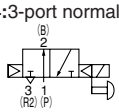
A2:2-port normally open



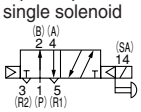
A3:3-port normally closed



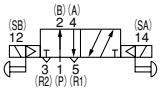
A4:3-port normally open



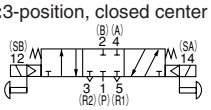
A5:5-port 2-position, single solenoid



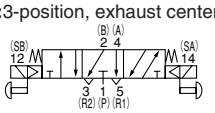
A6:5-port 2-position, double solenoid



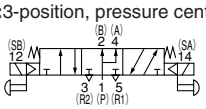
A7:3-position, closed center



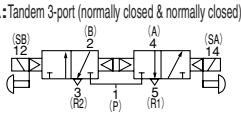
A8:3-position, exhaust center



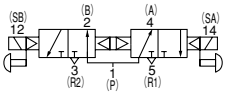
A9:3-position, pressure center



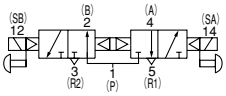
AA: Tandem 3-port (normally closed & normally closed)



AB: Tandem 3-port (normally open & normally open)



AC: Tandem 3-port (normally closed & normally open)

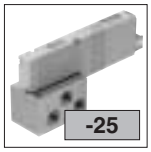


Sub-base

Without sub-base[Note1]



With sub-base[Note2]

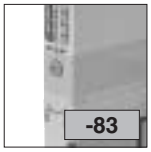


Manual override

Non-locking type



Locking protruding type



Wiring specification

Plug-in



S type plug connector
Without connector and leads



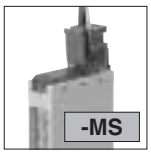
Positive common
S type plug connector
Lead wire 300mm [11.8in.]



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



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



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



Voltage

-D4
DC24V

-D5 Note3
DC12V

Model	Valve specification	Sub-base	Manual override	Wiring specification	Voltage
JA10 **JA10L**	**A1** **A2** **A3** **A4** **A5** **A6** **A7** **A8** **A9** **AA** **AB** **AC**	**Blank** **-25** Note2	**Blank** **-83**	**Blank** Note2 **-PN** **-PS** **-PS3** **-MS** **-MS3**	**-D4** **-D5** Note3

Notes: 1. Cannot be used as a single valve unit. Two manifold mounting screws are provided.
2. When ordering with a sub-base, the "**Blank** (plug-in)" cannot be selected as the wiring specification. Select from among **-PN**, **-PS**, **-PS3**, **-MS** or **-MS3**.
3. **-D5**(DC12V) is not available in the low current type.

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Additional Parts Order Codes for Single Valve Unit

Parts for single valve unit

JAZ - ☐

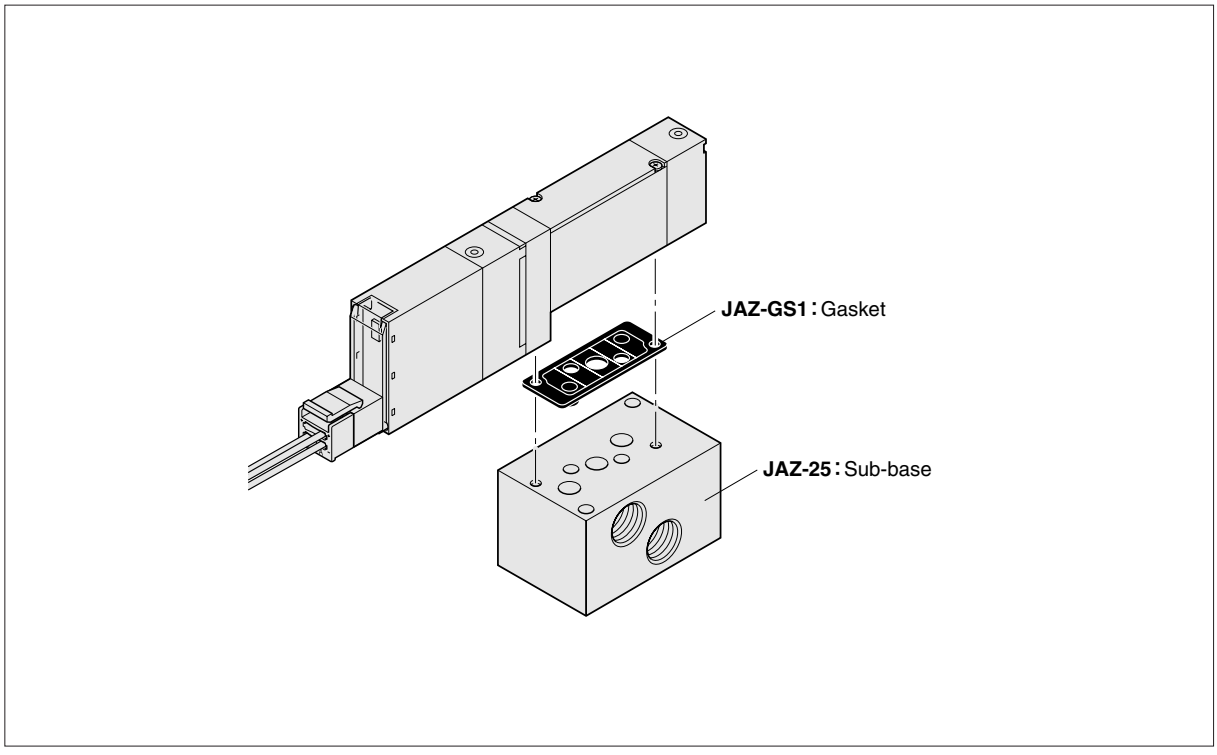
Parts content
25 : Sub-base (sub-base and gasket)[Note 1]
GS1 : Gasket[Note 2]

Notes: 1. Valve mounting screws are not included.
2. Care should be taken that this gasket is different from the **GS2** gasket for the split manifolds.

Connector-related

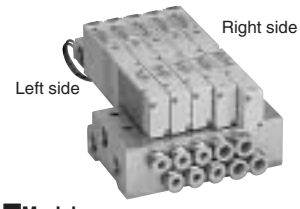
JAZ - ☐

Connector specification
CP : Positive common plug connector, lead wire length 300mm [11.8in.]
CP3 : Positive common plug connector, lead wire length 3000mm [118in.]
CPN : Positive common plug connector, without lead wire (short bar and contacts included)
CM : Negative common plug connector, lead wire length 300mm [11.8in.]
CM3 : Negative common plug connector, lead wire length 3000mm [118in.]
CMN : Negative common plug connector, without lead wire (short bar and contacts included)



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Monoblock Manifold Order Codes



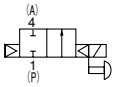
Model

JA10
Standard type

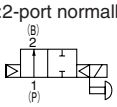
JA10L
Low current type

Valve specification

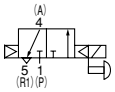
A1:2-port normally closed



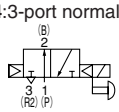
A2:2-port normally open



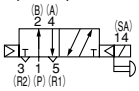
A3:3-port normally closed



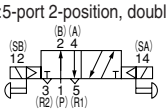
A4:3-port normally open



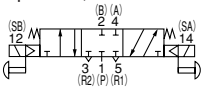
A5:5-port 2-position, single sol.



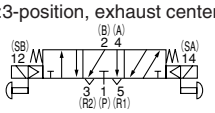
A6:5-port 2-position, double sol.



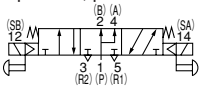
A7:3-position, closed center



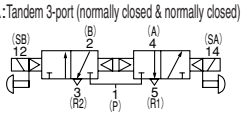
A8:3-position, exhaust center



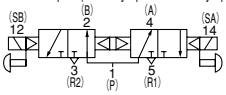
A9:3-position, pressure center



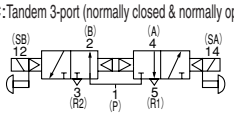
AA:Tandem 3-port (normally closed & normally closed)



AB:Tandem 3-port (normally open & normally open)

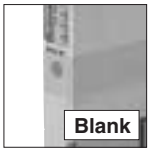


AC:Tandem 3-port (normally closed & normally open)

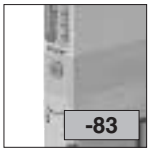


Manual override

Non-locking type



Locking protruding type



Wiring specification

S type plug connector
Without connector and leads



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



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



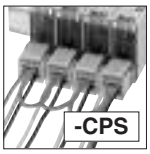
Positive common
S type plug connector
Lead wire 3000mm [118in.]



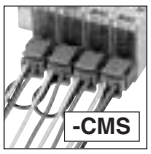
Negative common
S type plug connector
Lead wire 3000mm [11.8in.]



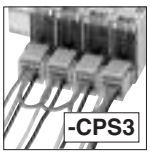
Positive common pre-wired terminal
S type plug connector
Lead wire 300mm [11.8in.]



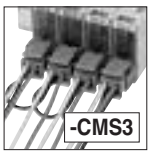
Negative common pre-wired terminal
S type plug connector
Lead wire 300mm [11.8in.]



Positive common pre-wired terminal
S type plug connector
Lead wire 3000mm [118in.]



Negative common pre-wired terminal
S type plug connector
Lead wire 3000mm [118in.]

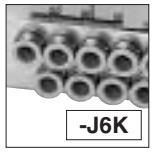


Manifold fitting specification

With ϕ 4[0.157in.] fittings



With ϕ 6[0.236in.] fittings



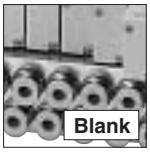
Back pressure prevention valve

Blank
Without back pressure prevention valve

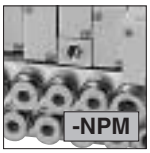
-E1
With back pressure prevention valve

Individual air supply spacer

Without spacer



With individual air supply spacer



Voltage

-D4
DC24V

-D5 Note2
DC12V

Model	Number of units	Station	Model	Valve specification	Manual override	Wiring specification	Manifold fitting specification	Back pressure prevention valve	Individual air supply spacer	Voltage
Manifold model		Mounting valve model								
JAM	2 ⋮ 20	AJ	stn. 1 ⋮ stn.□ Note1	JA10 JA10L	A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC	Blank -83	-PN -PS -PS3 -CPS -CPS3 -MS -MS3 -CMS -CMS3	-J4K -J6K	Blank -E1	Blank -NPM	-D4 -D5 Note2
				JABP (for block-off plate)						

Notes: 1. Valve mounting location is from the left, with the solenoid on top, and the 4(A) and 2(B) ports in front.
2. **-D5** (DC12V) is not available in the low current type.

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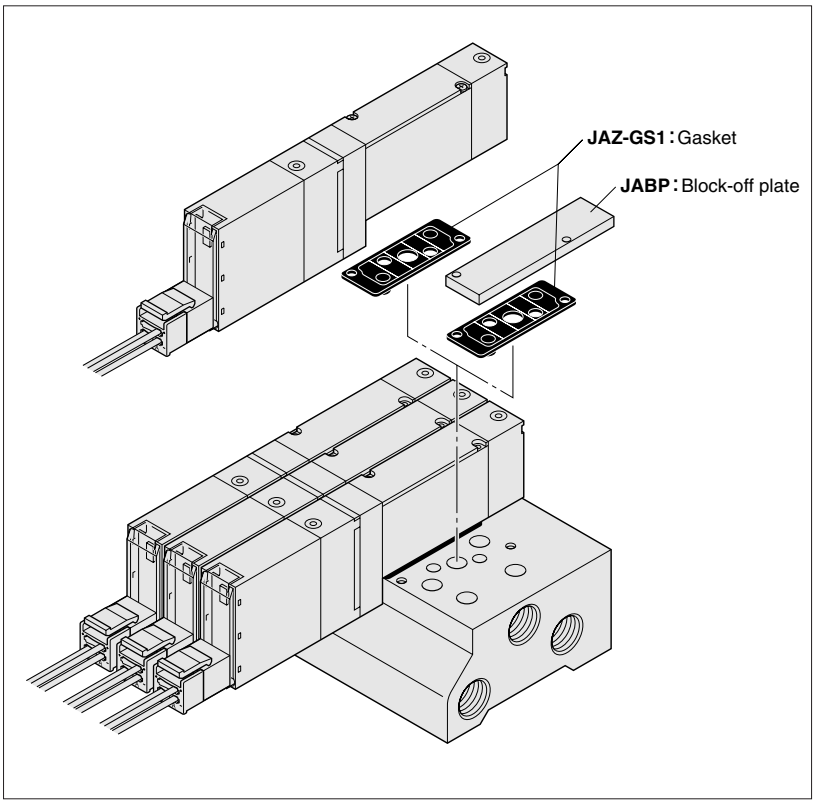
Additional Parts Order Codes for Monoblock Manifold

Manifold parts

JAZ - ☐

Parts description

GS1 : Gasket
E1 : Back pressure prevention valve (2 pcs. for monoblock type)
J4K : ϕ 4 fitting (2 pcs. for monoblock type, and 1 pc. gasket)
J6K : ϕ 6 fitting (2 pcs. for monoblock type, and 1 pc. gasket)
NPM: Individual air supply spacer
(Spacer body, gasket and 2 mounting screws)



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

JABP

Connector-related

JAZ - ☐

Connector specification

CP : Positive common plug connector, lead wire length 300mm [11.8in.]
CP3 : Positive common plug connector, lead wire length 3000mm [118in.]
CPN : Positive common plug connector, without lead wire (short bar and contacts included)
PA : Positive common A type, plug connector lead wire length 300mm※ [11.8in.]
PA3 : Positive common A type, plug connector lead wire length 3000mm※ [118in.]
PB : Positive common B type, plug connector lead wire length 300mm※ [11.8in.]
PB3 : Positive common B type, plug connector lead wire length 3000mm※ [118in.]
PC : Positive common C type, plug connector lead wire length 300mm※ [11.8in.]
PC3 : Positive common C type, plug connector lead wire length 3000mm※ [118in.]
CM : Negative common plug connector, lead wire length 300mm [11.8in.]
CM3 : Negative common plug connector, lead wire length 3000mm [118in.]
CMN: Negative common plug connector, without lead wire (short bar and contacts included)
MA : Negative common A type, plug connector lead wire length 300mm※ [11.8in.]
MA3 : Negative common A type, plug connector lead wire length 3000mm※ [118in.]
MB : Negative common B type, plug connector lead wire length 300mm※ [11.8in.]
MB3 : Negative common B type, plug connector lead wire length 3000mm※ [118in.]
MC : Negative common C type, plug connector lead wire length 300mm※ [11.8in.]
MC3 : Negative common C type, plug connector lead wire length 3000mm※ [118in.]

※For details, see p.178.

Manifold Order Code Example (6 units of JA series)

JAM6AJ

stn.1～2 **JA10A5-PS-J4K-D4**
stn.3～5 **JA10A6-PS-J6K-D4**
stn.6 **JABP-J6K**

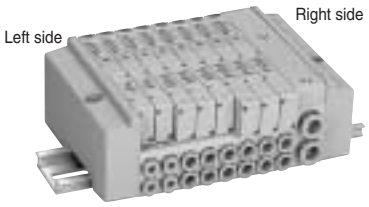
Note: This order code example has no relation to the illustration above.

Precautions for Order Codes

● **Order for valves only**
Place orders by **"Single Valve Unit Order Codes"** on p.189.
For common terminal wiring connections, order separately the common connector assemblies listed above.

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Split Manifold Non-Plug-in Type Order Codes



■Piping block specification (air supply and exhaust)

-JR :1(P) and 3, 5(R) ports ϕ8 [0.315in.] fitting right-side mounting
-JL :1(P) and 3, 5(R) ports ϕ8 [0.315in.] fitting left-side mounting
-JD :1(P) and 3, 5(R) ports ϕ8 [0.315in.] fitting both-side mounting
-JR1/4 :1(P) and 3, 5(R) ports 1/4 inch fitting right-side mounting
-JL1/4 :1(P) and 3, 5(R) ports 1/4 inch fitting left-side mounting
-JD1/4 :1(P) and 3, 5(R) ports 1/4 inch fitting both-side mounting
-JR3/8 :1(P) and 3, 5(R) ports 3/8 inch fitting right-side mounting
-JL3/8 :1(P) and 3, 5(R) ports 3/8 inch fitting left-side mounting
-JD3/8 :1(P) and 3, 5(R) ports 3/8 inch fitting both-side mounting



The photo shows the **-JR** type.

-MR :1(P) port ϕ8 [0.315in.] fitting, 3, 5(R) ports built-in muffler right-side mounting
-ML :1(P) port ϕ8 [0.315in.] fitting, 3, 5(R) ports built-in muffler left-side mounting
-MD :1(P) port ϕ8 [0.315in.] fitting, 3, 5(R) ports built-in muffler both-side mounting
-MR1/4 :1(P) port 1/4 inch fitting, 3, 5(R) ports built-in muffler right-side mounting
-ML1/4 :1(P) port 1/4 inch fitting, 3, 5(R) ports built-in muffler left-side mounting
-MD1/4 :1(P) port 1/4 inch fitting, 3, 5(R) ports built-in muffler both-side mounting
-MR3/8 :1(P) port 3/8 inch fitting, 3, 5(R) ports built-in muffler right-side mounting
-ML3/8 :1(P) port 3/8 inch fitting, 3, 5(R) ports built-in muffler left-side mounting
-MD3/8 :1(P) port 3/8 inch fitting, 3, 5(R) ports built-in muffler both-side mounting



The photo shows the **-MR** type.

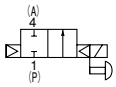
■Model

JA10
Standard type

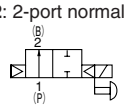
JA10L
Low current type

■Valve specification

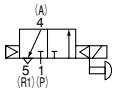
A1: 2-port normally closed



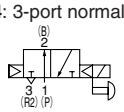
A2: 2-port normally open



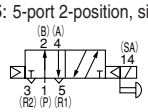
A3: 3-port normally closed



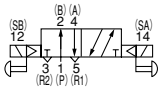
A4: 3-port normally open



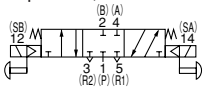
A5: 5-port 2-position, single sol.



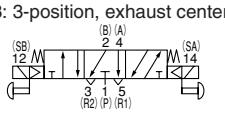
A6: 5-port 2-position, double sol.



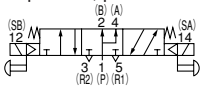
A7: 3-position, closed center



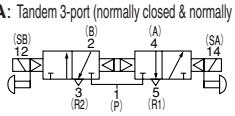
A8: 3-position, exhaust center



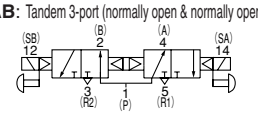
A9: 3-position, pressure center



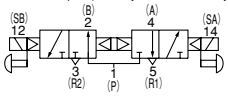
AA: Tandem 3-port (normally closed & normally closed)



AB: Tandem 3-port (normally open & normally open)



AC: Tandem 3-port (normally closed & normally open)

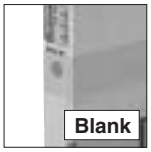


Model	Valve units	Piping block specification (air supply and exhaust)
Manifold model		
JAM	**2** ⋮ **20**	**NJ**	**-JR** **-MR** **-JL** **-ML** **-JD** **-MD** **-JR1/4** **-MR1/4** **-JL1/4** **-ML1/4** **-JD1/4** **-MD1/4** **-JR3/8** **-MR3/8** **-JL3/8** **-ML3/8** **-JD3/8** **-MD3/8**

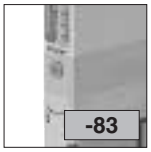
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■Manual override

Non-locking type



Locking protruding type



■Wiring specification

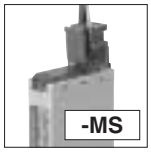
S type plug connector
Without connector ass'y



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



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



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



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



Positive common
pre-wired terminal
S type plug connector
Lead wire 300mm [11.8in.]



Negative common
pre-wired terminal
S type plug connector
Lead wire 300mm [11.8in.]



Positive common
pre-wired terminal
S type plug connector
Lead wire 3000mm [118in.]

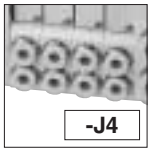


Negative common
pre-wired terminal
S type plug connector
Lead wire 3000mm [118in.]

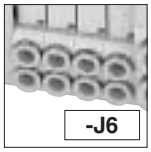


■Manifold fitting specification

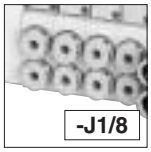
With ϕ 4[0.157in.] fittings



With ϕ 6[0.236in.] fittings



With 1/8 inch fittings



With 1/4 inch fittings



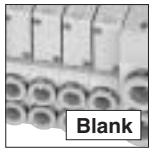
■Back pressure prevention valve

Blank
Without back pressure prevention valve

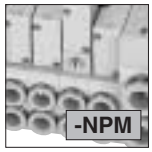
-E2
With back pressure prevention valve

■Individual air supply spacer

Without spacer



With individual air supply spacer



■Port isolator

Blank : Without port isolator
-S1 : For 1(P) port
-S3 : For 3(R2) and 5(R1) ports
-SA : For 1(P), 3(R2) and 5(R1) ports

■Voltage

-D4
DC24V
-D5 Note3
DC12V

Station	Model	Valve specification	Manual override	Wiring specification	Manifold fitting specification	Back pressure prevention valve	Individual air supply spacer	Port isolator	Voltage
Mounting valve model									
stn. 1 ⋮ stn.□ Note1	JA10 JA10L	A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC	Blank -83	-PN -PS -PS3 -CPS -CPS3 -MS -MS3 -CMS -CMS3	-J4 -J6 -J1/8 -J1/4	Blank -E2	Blank -NPM	Blank -S1 Note2 -S3 Note2 -SA Note2	-D4 -D5 Note3
	JABP (for block-off plate)								

Notes: 1. Valve mounting location is from the left, with the solenoid on top, and the 4(A) and 2(B) ports in front.
2. Port isolators can be installed only when piping blocks are mounted on both sides. In addition, only one location for each port isolator can be installed in one manifold for **-SA**, or one each port isolator for **-S1** and **-S3** for a total of two locations. When shipping, the designated port isolators are installed between the designated station and the station to its immediate left (the next smaller stn. No.).
3. **-D5** (DC12V) is not available in the low current type.

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

Manifold parts

JAZ - ☐

Parts description

GS2 : Gasket (for split type)
E2 : Back pressure prevention valve (2 pcs. for split type and 1 pc. gasket)
J4 : 2 pcs. ϕ4 fittings, and 1 pc. stopper pin
J6 : 2 pcs. ϕ6 fittings, and 1 pc. stopper pin
J8 : 2 pcs. ϕ8 fittings, and 1 pc. stopper pin
J1/8 : 2 pcs. 1/8 inch fittings, and 1 pc. stopper pin
J1/4 : 2 pcs. 1/4 inch fittings, and 1 pc. stopper pin
J1/4P : 2 pcs. 1/4 inch fittings for 1(P) and 3, 5(R) ports, and 1 pc. stopper pin
J3/8 : 2 pcs. 3/8 inch fittings, and 1 pc. stopper pin
M : Muffler for piping block
NPM : Individual air supply spacer (spacer body, gasket and 2 mounting screws)
S1 : Port isolator for 1(P) port
S3 : Port isolator for 3(R2) and 5(R1) ports
SA : Port isolator for 1(P) port, 3(R2) and 5(R1) ports

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

JABP

Piping block assembly

JAZ - ☐

Piping specification

PJ : 1(P) and 3, 5(R) ports ϕ8 fittings
PJ1/4 : 1(P) and 3, 5(R) ports 1/4 inch fittings
PJ3/8 : 1(P) and 3, 5(R) ports 3/8 inch fittings
PM : 1(P) port ϕ8 fitting, 3, 5(R) ports built-in mufflers
PM1/4 : 1(P) port 1/4 inch fitting, 3, 5(R) ports built-in mufflers
PM3/8 : 1(P) port 3/8 inch fitting, 3, 5(R) ports built-in mufflers

End blocks (one set of left and right)

JAZ - E

Connector-related

JAZ - ☐

Connector specification

CP : Positive common plug connector, lead wire length 300mm [11.8in.]
CP3 : Positive common plug connector, lead wire length 3000mm [118in.]
CPN : Positive common plug connector, without lead wire (short bar and contacts included)
PA : Positive common A type, plug connector lead wire length 300mm※ [11.8in.]
PA3 : Positive common A type, plug connector lead wire length 3000mm※ [118in.]
PB : Positive common B type, plug connector lead wire length 300mm※ [11.8in.]
PB3 : Positive common B type, plug connector lead wire length 3000mm※ [118in.]
PC : Positive common C type, plug connector lead wire length 300mm※ [11.8in.]
PC3 : Positive common C type, plug connector lead wire length 3000mm※ [118in.]
CM : Negative common plug connector, lead wire length 300mm [11.8in.]
CM3 : Negative common plug connector, lead wire length 3000mm [118in.]
CMN : Negative common plug connector, without lead wire (short bar and contacts included)
MA : Negative common A type, plug connector lead wire length 300mm※ [11.8in.]
MA3 : Negative common A type, plug connector lead wire length 3000mm※ [118in.]
MB : Negative common B type, plug connector lead wire length 300mm※ [11.8in.]
MB3 : Negative common B type, plug connector lead wire length 3000mm※ [118in.]
MC : Negative common C type, plug connector lead wire length 300mm※ [11.8in.]
MC3 : Negative common C type, plug connector lead wire length 3000mm※ [118in.]

※For details, see p.178.

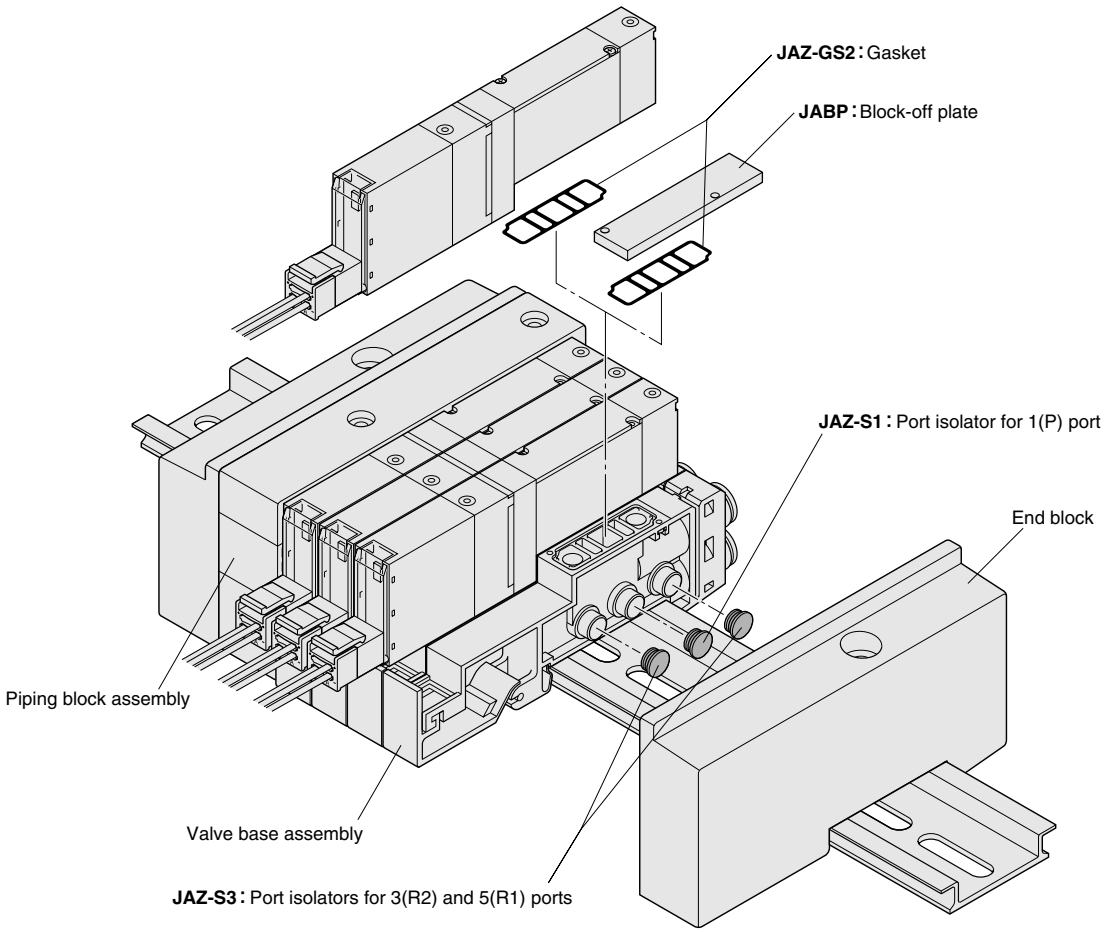
Valve base assembly (valve base and gasket)

JAZ - ☐

Piping specification

VJ4 : With ϕ4 fitting
VJ6 : With ϕ6 fitting
VJ1/8 : With 1/8 inch fitting
VJ1/4 : With 1/4 inch fitting

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Manifold Order Code Example (6 units of JA series)

JAM6NJ-JR

stn.1～2 JA10A5-PS-J4-D4
stn.3～5 JA10A6-PS-J6-D4
stn.6 JABP-J6

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

Precautions for Order Codes

● **Order for valves only**

Place orders by **"Single Valve Unit Order Codes"** on p.189.
For wiring specifications, **Blank** (plug-in type valve) cannot be selected.
For common terminal wiring connections, order separately the common connector assemblies listed to the left.

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Split Manifold Plug-in Type Order Codes

Left side　　Right side



■Piping block specification (air supply and exhaust)

-JR :1(P) and 3, 5(R) ports φ8 [0.315in.] fitting right-side mounting
-JL :1(P) and 3, 5(R) ports φ8 [0.315in.] fitting left-side mounting
-JD :1(P) and 3, 5(R) ports φ8 [0.315in.] fitting both-side mounting
-JR1/4 :1(P) and 3, 5(R) ports 1/4 inch fitting right-side mounting
-JL1/4 :1(P) and 3, 5(R) ports 1/4 inch fitting left-side mounting
-JD1/4 :1(P) and 3, 5(R) ports 1/4 inch fitting both-side mounting
-JR3/8 :1(P) and 3, 5(R) ports 3/8 inch fitting right-side mounting
-JL3/8 :1(P) and 3, 5(R) ports 3/8 inch fitting left-side mounting
-JD3/8 :1(P) and 3, 5(R) ports 3/8 inch fitting both-side mounting



The photo shows the **-JR** type.

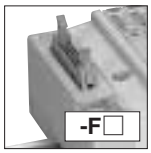
-MR :1(P) port φ8 [0.315in.] fitting, 3, 5(R) ports built-in muffler right-side mounting
-ML :1(P) port φ8 [0.315in.] fitting, 3, 5(R) ports built-in muffler left-side mounting
-MD :1(P) port φ8 [0.315in.] fitting, 3, 5(R) ports built-in muffler both-side mounting
-MR1/4 :1(P) port 1/4 inch fitting, 3, 5(R) ports built-in muffler right-side mounting
-ML1/4 :1(P) port 1/4 inch fitting, 3, 5(R) ports built-in muffler left-side mounting
-MD1/4 :1(P) port 1/4 inch fitting, 3, 5(R) ports built-in muffler both-side mounting
-MR3/8 :1(P) port 3/8 inch fitting, 3, 5(R) ports built-in muffler right-side mounting
-ML3/8 :1(P) port 3/8 inch fitting, 3, 5(R) ports built-in muffler left-side mounting
-MD3/8 :1(P) port 3/8 inch fitting, 3, 5(R) ports built-in muffler both-side mounting



The photo shows the **-MR** type.

■Wiring specification (wiring block)

Flat cable connector
(with socket and strain relief)



-F200 : 20-pin (connector on upper side)
-F201 : 20-pin (connector on upper side)
-F260 : 26-pin (connector on upper side)



-F200E : 20-pin (connector on side)
-F201E : 20-pin (connector on side)
-F260E : 26-pin (connector on side)

D-sub connector



-D250 : 25-pin (connector on upper side)
(M2.6 mounting screws)
-D251 : 25-pin (connector on upper side)
(M2.6 mounting screws)
-D250U : 25-pin (connector on upper side)
(4-40UNC mounting screws)
-D251U : 25-pin (connector on upper side)
(4-40UNC mounting screws)

※ For details of wiring specification, see p.205.

D-sub connector



-D250E : 25-pin (connector on side)
(M2.6 mounting screws)
-D251E : 25-pin (connector on side)
(M2.6 mounting screws)
-D250EU : 25-pin (connector on side)
(4-40UNC mounting screws)
-D251EU : 25-pin (connector on side)
(4-40UNC mounting screws)



-D370U : 37-pin (connector on upper side)
(4-40UNC mounting screws)

■Wiring connection specification

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

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

Note: The wiring for the block-off plate is normally the one for the double solenoid. However, when -S is designated as the block-off plate wiring specification, the block-off plate wiring of the station is changed to the single solenoid.

■Pre-wired common

Blank
Positive common

-CM
Negative common

■Voltage

-D4
DC24V

-D5 Note4
DC12V

Model	Valve units	Piping block specification (air supply and exhaust)	Wiring specification	Wiring connection specification	pre-wired common	Voltage
Manifold model						
JAM	2 ⋮ □ Note1	PJ	-JR -MR -JL -ML -JD -MD -JR1/4 -MR1/4 -JL1/4 -ML1/4 -JD1/4 -MD1/4 -JR3/8 -MR3/8 -JL3/8 -ML3/8 -JD3/8 -MD3/8	-F200 -F201 -F260 -F200E -F201E -F260E -D250 -D251 -D250U -D251U -D250E -D251E -D250EU -D251EU -D370U	Blank -D	Blank -CM	-D4 -D5Note4

Notes: 1. For the maximum number of units, see the table for the maximum number of valve units by wiring specification, on p.199.

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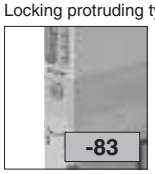
Model

JA10
Standard type

JA10L
Low current type

Manual override

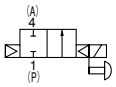
Non-locking type — **Blank**



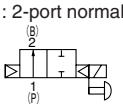
Locking protruding type — **-83**

Valve specification

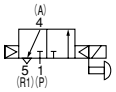
A1 : 2-port normally closed



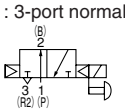
A2 : 2-port normally open



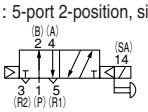
A3 : 3-port normally closed



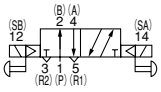
A4 : 3-port normally open



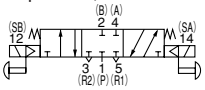
A5 : 5-port 2-position, single sol.



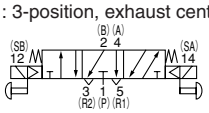
A6 : 5-port 2-position, double sol.



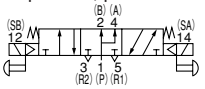
A7 : 3-position, closed center



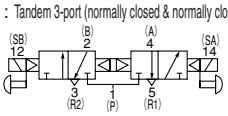
A8 : 3-position, exhaust center



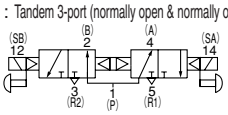
A9 : 3-position, pressure center



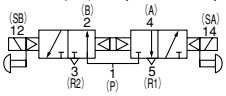
AA : Tandem 3-port (normally closed & normally closed)



AB : Tandem 3-port (normally open & normally open)

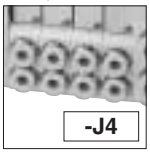


AC : Tandem 3-port (normally closed & normally closed)

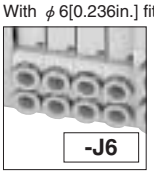


Manifold fitting specification

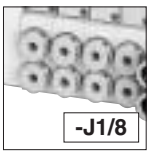
With ϕ 4[0.157in.] fittings — **-J4**



With ϕ 6[0.236in.] fittings — **-J6**



With 1/8 inch fittings — **-J1/8**



With 1/4 inch fittings — **-J1/4**



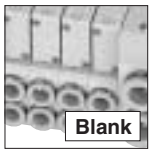
Back pressure prevention valve

Blank
Without back pressure prevention valve

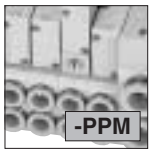
-E2
With back pressure prevention valve

Individual air supply spacer

Without spacer — **Blank**



With individual air supply spacer — **-PPM**



Port isolator

Blank : Without port isolator
-S1 : For 1(P) port
-S3 : For 3(R2) and 5(R1) ports
-SA : For 1(P), 3(R2) and 5(R1) ports

Block-off plate wiring specification

Blank
Wiring is always the one for the double solenoid.

-S
When **-S** is designated, the block-off plate wiring of the station is changed to the single solenoid.

Voltage

-D4
DC24V

-D5 Note4
DC12V

Station	Model	Valve specification	Manual override	Manifold fitting specification	Back pressure prevention valve	Individual air supply spacer	Port isolator	Block-off plate wiring specification	Voltage
Mounting valve model									
stn. 1 ⋮ stn.□ Note2	JA10 JA10L	A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC	Blank -83	-J4 -J6 -J1/8 -J1/4	Blank -E2	Blank -PPM	Blank -S1 Note3 -S3 Note3 -SA Note3	Blank -S	-D4 -D5 Note4
	JABPP (for block-off plate)								

Notes: 2. Valve mounting location is from the left, with the solenoid on top, and the 4(A) and 2(B) ports in front.
3. Port isolators can be installed only when piping blocks are mounted on both sides. In addition, only one location of each port isolator can be installed in one manifold for **-SA**, or one each port isolator for **-S1** and **-S3**, for a total of two locations. When shipping, the designated port isolators are installed between the designated station and the station to its immediate left (the next smaller stn. No.).
4. **-D5** (DC12V) is not available in the low current type.

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Additional Parts Order Codes for Split Manifold Plug-in Type

Manifold parts

JAZ - □

Parts description
GS2 : Gasket (for split type)
E2 : Back pressure prevention valve (2 pcs. for split type, and 1 pc. gasket)
J4 : 2 pcs. ϕ 4 fittings, and 1 pc. stopper pin
J6 : 2 pcs. ϕ 6 fittings, and 1 pc. stopper pin
J8 : 2 pcs. ϕ 8 fittings, and 1 pc. stopper pin
J1/8 : 2 pcs. 1/8 inch fittings, and 1 pc. stopper pin
J1/4 : 2 pcs. 1/4 inch fittings, and 1 pc. stopper pin
J1/4P : 2 pcs. 1/4 inch fittings for 1(P) and 3, 5(R) ports, and 1 pc. stopper pin
J3/8 : 2 pcs. 3/8 inch fittings, and 1 pc. stopper pin
M : Muffler for piping block
PPM : Individual air supply spacer (spacer body, gasket, 2 mounting screws, and connector Ass'y)
S1 : Port isolator for 1(P) port
S3 : Port isolator for 3(R2) and 5(R1) ports
SA : Port isolator for 1(P) port, 3(R2) and 5(R1) ports

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

JABPP

Piping block assembly

JAZ - □

Piping specification
PJ : 1(P) and 3, 5(R) ports ϕ 8 fittings
PJ1/4 : 1(P) and 3, 5(R) ports 1/4 inch fittings
PJ3/8 : 1(P) and 3, 5(R) ports 3/8 inch fittings
PM : 1(P) port ϕ 8 fitting, 3, 5(R) ports built-in mufflers
PM1/4 : 1(P) port 1/4 inch fitting, 3, 5(R) ports built-in mufflers
PM3/8 : 1(P) port 3/8 inch fitting, 3, 5(R) ports built-in mufflers

Wiring block assembly (one set)

JAZ - □ **-** □ **-** □

Voltage
D4 : DC24V
D5 : DC12V

Pre-wired common
Blank : Positive common
CM : Negative common

Wiring specification
F200 : Flat cable connector
F201 : Flat cable connector
F260 : Flat cable connector
D250 : D-sub connector with M2.6 mounting screws
D251 : D-sub connector with M2.6 mounting screws
D250U : D-sub connector with 4-40 UNC mounting screws
D251U : D-sub connector with 4-40 UNC mounting screws
D370U : D-sub connector with 4-40 UNC mounting screws

End blocks (one set of left and right)

JAZ - EP

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

JAZ - □ **-** □ **-** □

Pre-wired common
Blank : Positive common
CM : Negative common

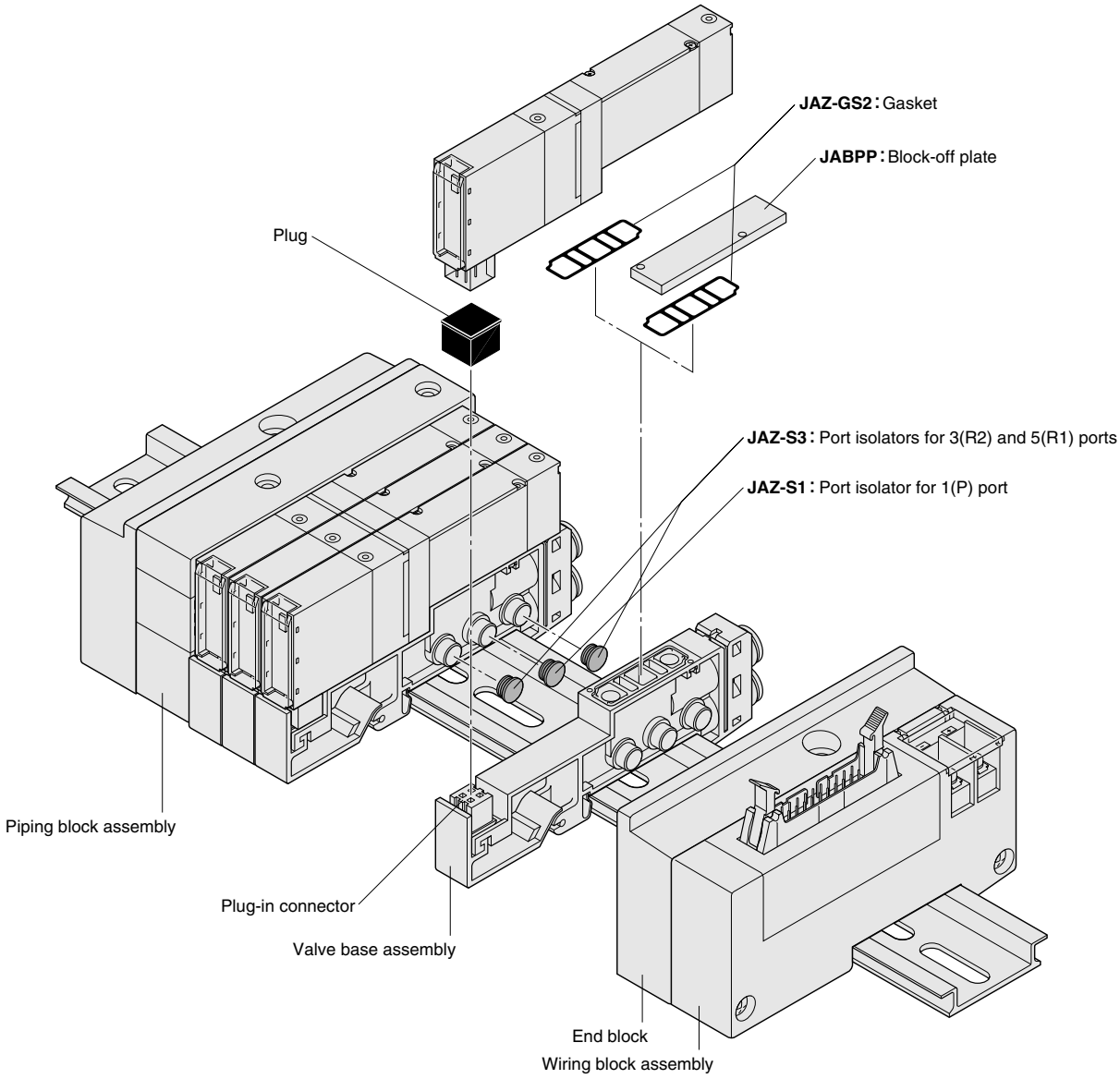
Wiring specification
D : For D-sub connector
F : For flat cable connector

Piping specification
VJ4 : With ϕ 4 fitting
VJ6 : With ϕ 6 fitting
VJ1/8 : With 1/8 inch fitting
VJ1/4 : With 1/4 inch fitting

■Table for maximum number of valve units by wiring specification

Wiring specification	Max. outputs	Maximum number of units: Wiring specification: Packed wiring (**Blank**)	Maximum number of units: Wiring specification: Double wiring (**-D**)
F200□ Flat cable (20P)	16	Varies depending on the mounted number of single solenoids, double solenoids and block-off plates. The number of controllable solenoids should be the maximum number of outputs or less. Max. 20 units possible.	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
D370U D-sub connector (37P)	32		16 units

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Manifold Order Code Example (8 units of JA series)

JAM8PJ-JR-F201-D4

stn.1～4 JA10A5-J4-D4
stn.5～7 JA10A6-J6-D4
stn.8 JABPP-J6

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

Precautions for Order Codes

● **Order for valves only**

Place orders by **"Single Valve Unit Order Codes"** on p.189.
The wiring specification, however, is compatible with the **Blank** (plug-in type) only.

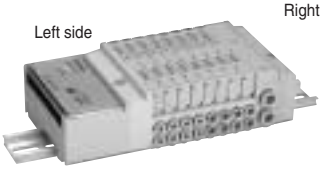
● **Wiring connection specification**

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

Note: The wiring for the block-off plate is normally the one for the double solenoid. However, when **-S** is designated as the block-off plate wiring specification, the block-off plate wiring of the station is changed to the single solenoid.

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Serial Transmission Type Order Codes



■Piping block specification (air supply and exhaust)

-JR :1(P) and 3, 5(R) ports ϕ8 [0.315in.] fitting right-side mounting
-JL :1(P) and 3, 5(R) ports ϕ8 [0.315in.] fitting left-side mounting
-JD :1(P) and 3, 5(R) ports ϕ8 [0.315in.] fitting both-side mounting
-JR1/4 :1(P) and 3, 5(R) ports 1/4 inch fitting right-side mounting
-JL1/4 :1(P) and 3, 5(R) ports 1/4 inch fitting left-side mounting
-JD1/4 :1(P) and 3, 5(R) ports 1/4 inch fitting both-side mounting
-JR3/8 :1(P) and 3, 5(R) ports 3/8 inch fitting right-side mounting
-JL3/8 :1(P) and 3, 5(R) ports 3/8 inch fitting left-side mounting
-JD3/8 :1(P) and 3, 5(R) ports 3/8 inch fitting both-side mounting



The photo shows the **-JR** type.

-MR :1(P) port ϕ8 [0.315in.] fitting, 3, 5(R) ports built-in muffler right-side mounting
-ML :1(P) port ϕ8 [0.315in.] fitting, 3, 5(R) ports built-in muffler left-side mounting
-MD :1(P) port ϕ8 [0.315in.] fitting, 3, 5(R) ports built-in muffler both-side mounting
-MR1/4 :1(P) port 1/4 inch fitting, 3, 5(R) ports built-in muffler right-side mounting
-ML1/4 :1(P) port 1/4 inch fitting, 3, 5(R) ports built-in muffler left-side mounting
-MD1/4 :1(P) port 1/4 inch fitting, 3, 5(R) ports built-in muffler both-side mounting
-MR3/8 :1(P) port 3/8 inch fitting, 3, 5(R) ports built-in muffler right-side mounting
-ML3/8 :1(P) port 3/8 inch fitting, 3, 5(R) ports built-in muffler left-side mounting
-MD3/8 :1(P) port 3/8 inch fitting, 3, 5(R) ports built-in muffler both-side mounting



The photo shows the **-MR** type.

■Serial transmission block specification

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



For details, see p.185.

-A1 : For Omron CompoBus/S (16 outputs)
-A2 : For Omron CompoBus/S (8 outputs)
-B1 : For Mitsubishi Electric CC-Link
-D1 : For DeviceNet (CompoBus/D)

■Wiring connection specification

Blank

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

-D

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

Note: The wiring for the block-off plate is normally the one for the double solenoid. However, when -S is designated as the block-off plate wiring specification, the block-off plate wiring of the station is changed to the single solenoid.

Model	Valve units	Piping block specification (air supply and exhaust)	Serial transmission block specification	Wiring connection specification
Manifold model				
JAM	**2** ⋮ □ Note1	**SJ**	**-JR -MR** **-JL -ML** **-JD -MD** **-JR1/4 -MR1/4** **-JL1/4 -ML1/4** **-JD1/4 -MD1/4** **-JR3/8 -MR3/8** **-JL3/8 -ML3/8** **-JD3/8 -MD3/8**	**-A1** **-A2** **-B1** **-D1**	**Blank** **-D**

Notes: 1. For the maximum number of units, see the table for the maximum number of valve units by serial transmission block specification, on p.203.

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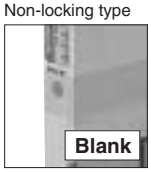
Model

JA10
Standard type

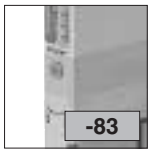
JA10L
Low current type

Manual override

Non-locking type

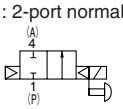


Locking protruding type

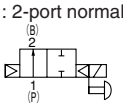


Valve specification

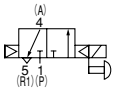
A1 : 2-port normally closed



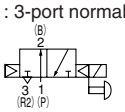
A2 : 2-port normally open



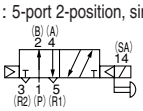
A3 : 3-port normally closed



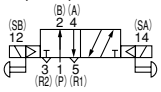
A4 : 3-port normally open



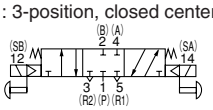
A5 : 5-port 2-position, single sol.



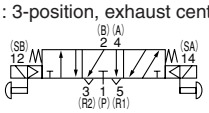
A6 : 5-port 2-position, double sol.



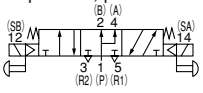
A7 : 3-position, closed center



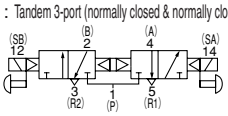
A8 : 3-position, exhaust center



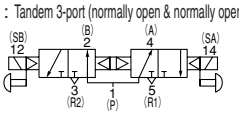
A9 : 3-position, pressure center



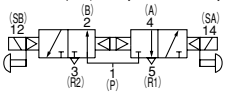
AA : Tandem 3-port (normally closed & normally closed)



AB : Tandem 3-port (normally open & normally open)

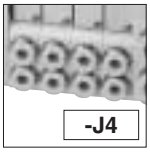


AC : Tandem 3-port (normally closed & normally open)

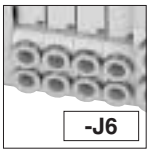


Manifold fitting specification

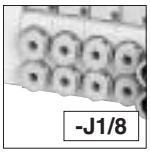
With ϕ 4[0.157in.] fittings



With ϕ 6[0.236in.] fittings



With 1/8 inch fittings



With 1/4 inch fittings



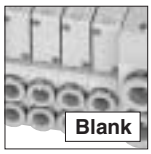
Back pressure prevention valve

Blank
Without back pressure prevention valve

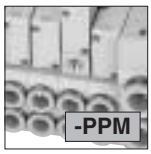
-E2
With back pressure prevention valve

Individual air supply spacer

Without spacer



With individual air supply spacer



Port isolator

Blank : Without port isolator
-S1 : For 1(P) port
-S3 : For 3(R2) and 5(R1) ports
-SA : For 1(P), 3(R2) and 5(R1)ports

Block-off plate wiring specification

Blank
Wiring is always the one for the double solenoid.

-S
When **-S** is designated, the block-off plate wiring of the station is changed to the single solenoid.

Voltage

-D4
DC24V

Station	Model	Valve specification	Manual override	Manifold fitting specification	Back pressure prevention valve	Individual air supply spacer	Port isolator	Block-off plate wiring specification	Voltage
Mounting valve model									
stn. 1 ⋮ stn.□ Note2	JA10 JA10L	A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC	Blank -83	-J4 -J6 -J1/8 -J1/4	Blank -E2	Blank -PPM	Blank -S1Note3 -S3Note3 -SANote3	Blank -S	-D4
	JABPP (for block-off plate)								

Notes: 2. Valve mounting location is from the left, with the solenoid on top, and the 4(A) and 2(B) ports in front.
3. Port isolators can be installed only when piping blocks are mounted on both sides. In addition, only one location of each port isolator can be installed in one manifold for **-SA,** or one each port isolator for **-S1** and **-S3**, for a total of two locations. When shipping, the designated port isolators are installed between the designated station and the station to its immediate left (the next smaller stn. No.).

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Manifold parts

JAZ - □

Parts description
GS2 : Gasket (for split type)
E2 : Back pressure prevention valve (2 pcs. for split type, and 1 pc. gasket)
J4 : 2 pcs. ϕ4 fittings, and 1 pc. stopper pin
J6 : 2 pcs. ϕ6 fittings, and 1 pc. stopper pin
J8 : 2 pcs. ϕ8 fittings, and 1 pc. stopper pin
J1/8 : 2 pcs. 1/8 inch fittings, and 1 pc. stopper pin
J1/4 : 2 pcs. 1/4 inch fittings, and 1 pc. stopper pin
J1/4P : 2 pcs. 1/4 inch fittings for 1(P) and 3, 5(R) ports, and 1 pc. stopper pin
J3/8 : 2 pcs. 3/8 inch fittings, and 1 pc. stopper pin
M : Muffler for piping block
PPM : Individual air supply spacer (spacer body, gasket, 2 mounting screws, and connector Ass'y)
S1 : Port isolator for 1(P) port
S3 : Port isolator for (R2) and 5(R1) ports
SA : Port isolator for 1(P) port, 3(R2) and 5(R1) ports

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

JABPP

Piping block assembly

JAZ - □

Piping specification
PJ : 1(P) and 3, 5(R) ports ϕ8 fittings
PJ1/4 : 1(P) and 3, 5(R) ports 1/4 inch fittings
PJ3/8 : 1(P) and 3, 5(R) ports 3/8 inch fittings
PM : 1(P) port ϕ8 fitting, 3, 5(R) ports built-in mufflers
PM1/4 : 1(P) port 1/4 inch fitting, 3, 5(R) ports built-in mufflers
PM3/8 : 1(P) port 3/8 inch fitting, 3, 5(R) ports built-in mufflers

End blocks (one set of left and right)

JAZ - EP

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

JAZ - □ **- F**

Piping specification
VJ4 : With ϕ4 fitting
VJ6 : With ϕ6 fitting
VJ1/8 : With 1/8 inch fitting
VJ1/4 : With 1/4 inch fitting

Serial transmission block (single unit)

YS5 □ □

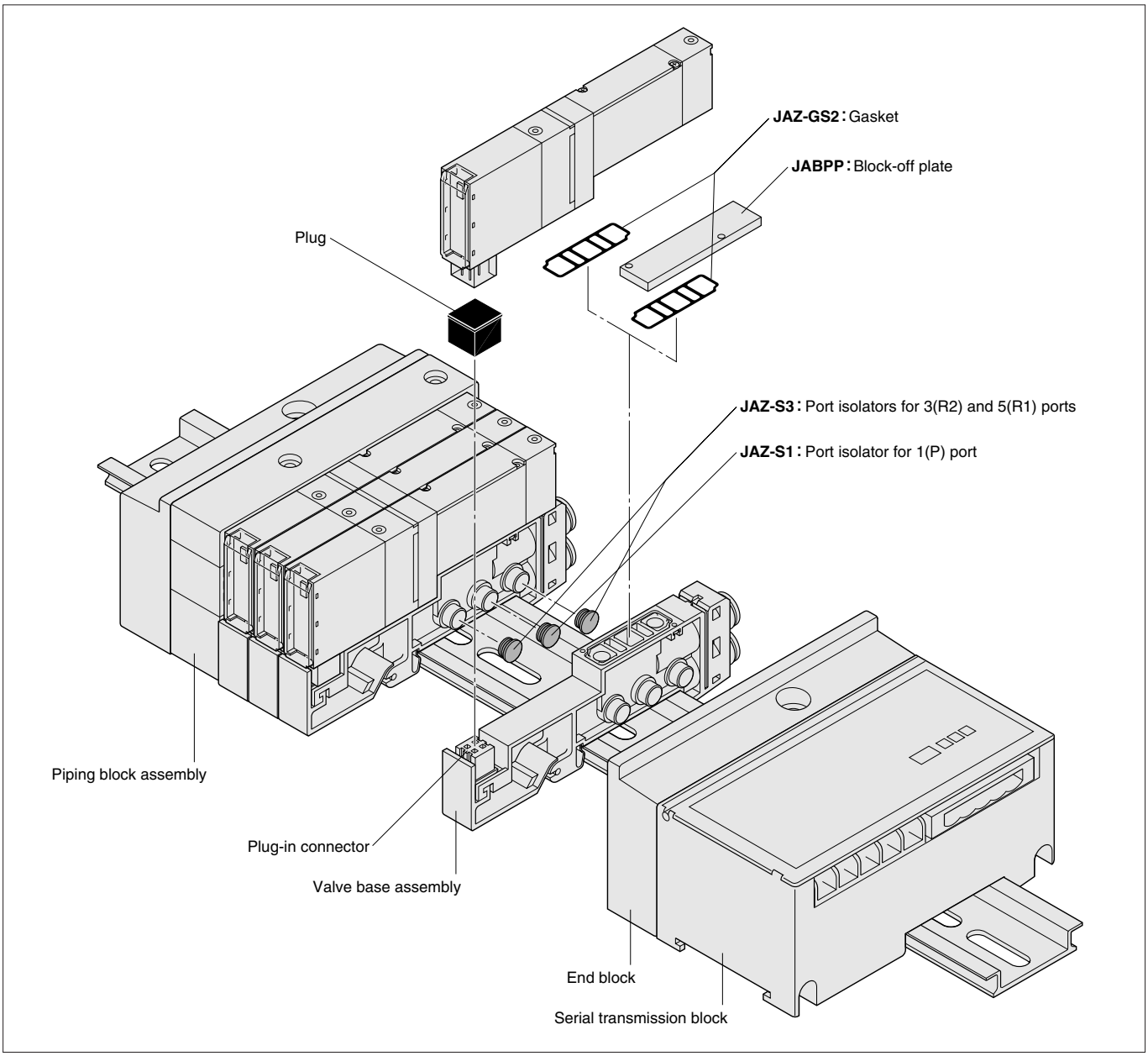
Options
Blank: For replacement of JA Series serial transmission block
U : With flat cable (general purpose type) Note compatible with F201
Note: For general purpose type, see p.185.

Serial transmission block specification
A1: For Omron CompoBus/S (16 outputs)
A2: For Omron CompoBus/S (8 outputs)
B1: For Mitsubishi Electric CC-Link
D1: For DeviceNet (CompoBus/D)

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

Transmission block specification	Max. outputs	Maximum number of units: Wiring specification: Packed wiring (**Blank**)	Maximum number of units: Wiring specification: Double wiring (**-D**)
-A1 : For Omron CompoBus/S (16 outputs)	16	Varies depending on the mounted number of single solenoids, double solenoids and block-off plates.The number of controllable solenoids should be the maximum number of outputs or less.	8 units
-A2 : For Omron CompoBus/S (8 outputs)	8		4 units
-B1 : For Mitsubishi Electric CC-Link	16		8 units
-D1 : For DeviceNet (CompoBus/D)	16		8 units

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Manifold Order Code Example (8 units of JA series)

JAM8SJ-JR-A1

stn.1～4 JA10A5-J4-D4
stn.5～7 JA10A6-J6-D4
stn.8 JABPP-J6

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

Precautions for Order Codes

● **Order for valves only**
Place orders by **"Single Valve Unit Order Codes"** on p.189.
The wiring specification, however, is compatible with the **Blank** (plug-in type) only.

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

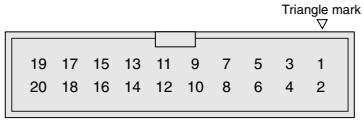
Note: The wiring for the block-off plate is normally the one for the double solenoid. However, when **-S** is designated as the block-off plate wiring specification, the block-off plate wiring of the station is changed to the single solenoid.

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Split Manifold Plug-in Type Pin Locations by Wiring Specification (TOP VIEW)

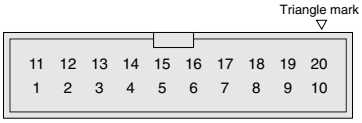
Flat cable connector (20-pin)

●**-F200**□ (Maximum 16 outputs)



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

●**-F201**□ (Maximum 16 outputs)



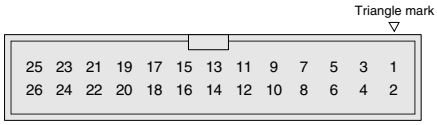
1～8 : Control pin
11～18 : Control pin
9, 19 : (−) pin (Short-circuited within the wiring block)
10, 20 : (+) pin (Short-circuited within the wiring block)

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

Remark : The **-F201** corresponds Koganei's pin locations for the PC wiring system (wire-saving unit). For details, see Catalog No.V3124 PC Wiring Systems.

Flat cable connector (26-pin)

●**-F260**□ (Maximum 20 outputs)

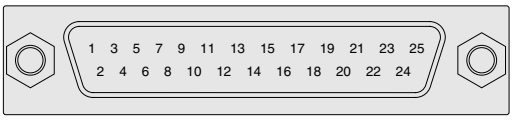


1～20 : Control pin
23, 24 : (−) pin (Short-circuited within the wiring block)
25, 26 : (+) pin (Short-circuited within the wiring block)

※For the relationship between the pin No. (terminal No.) and the corresponding solenoid, see p.208～211.

D-sub connector (25-pin)

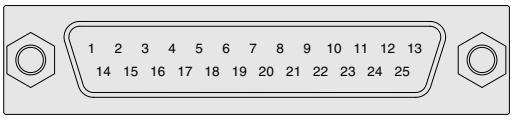
●**-D250**□ (Maximum 16 outputs)



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

Caution: For the sake of convenience, the connector pins are assigned based on the solenoid valve wiring sequence, which differs from the pin locations and pin numbers (marked) prescribed in JIS-X5101 for the data circuit-terminating equipment (DCE).

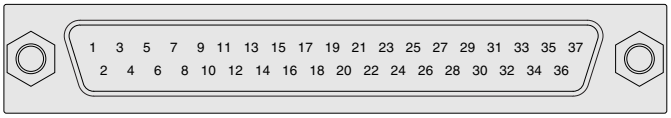
●**-D251**□ Pin locations based on JIS (Maximum 20 outputs)



1～10, 14～23 : Control pin
12, 13 : (−) pin (Short-circuited within the wiring block)
24, 25 : (+) pin (Short-circuited within the wiring block)

D-sub connector (37-pin)

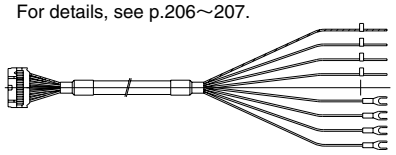
●**-D370U** (Maximum 32 outputs)



1～32 : Control pin
34, 35 : Common pin (For negative common)
36, 37 : Common pin (For positive common)

Caution: For the sake of convenience, the connector pins are assigned based on the solenoid valve wiring sequence, which differs from the pin locations and pin numbers (marked) prescribed in JIS-X5103 for the data circuit-terminating equipment (DCE).

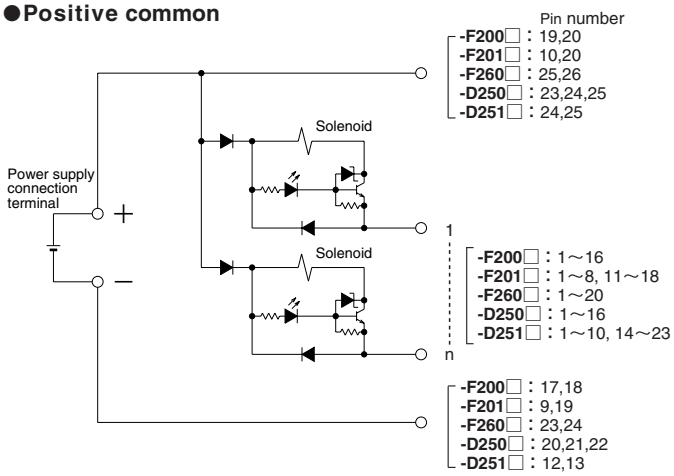
●Special cable assemblies are available.
For details, see p.206～207.



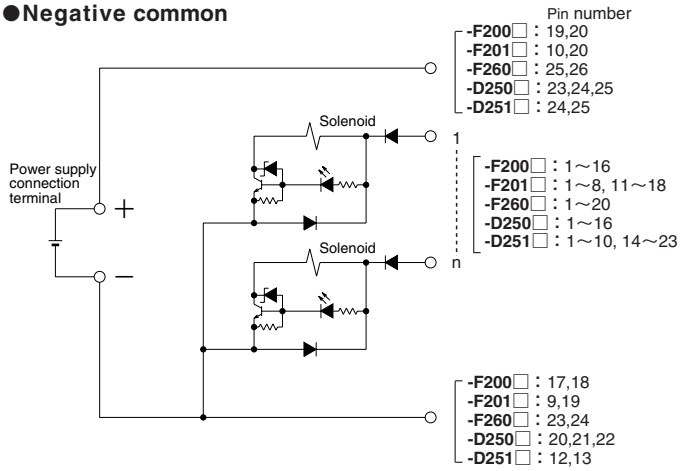
Detailed Diagram of Wiring System

Flat cable connector and D-sub connector (DC24V, DC12V)

●**Positive common**



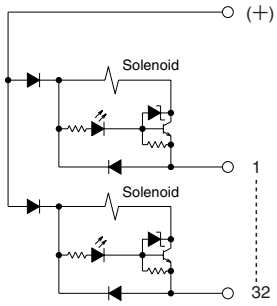
●**Negative common**



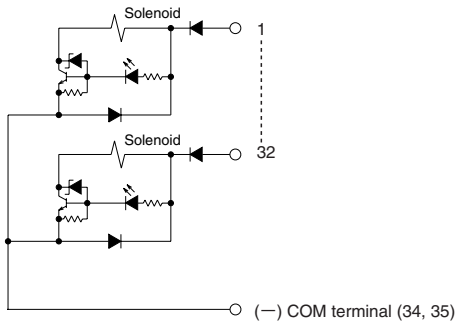
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D-sub connector -D370U

●Positive common



●Negative common



JA Series Split Manifold Plug-in Type Cable Assemblies by Wiring Specification mm [in.]

Special cable assemblies are individually available for every wiring specification.

■Order Code

FMA - □ - □ - □

Types of special cables
200W : -F200□ special cable assembly
201W : -F201□ special cable assembly
260W : -F260□ special cable assembly
250W : -D250□ special cable assembly
251W : -D251□ special cable assembly

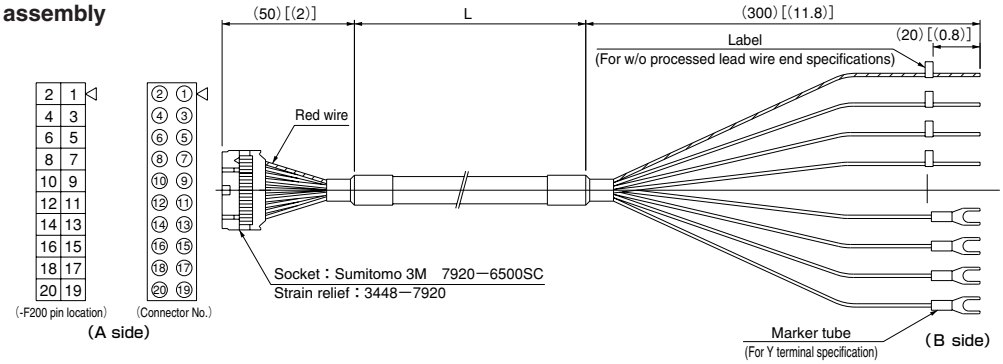
Lead wire end processing
Blank: w/o processed lead wire end
〔with special label/No. indication〕
Y : Y terminal (M3.5)〔with marker tube/No. indication〕

Cable length (m): 0.5～5.0 [20～197in.]
(Enter with 0.5m [20in.] pitch).
※Used cable: UL STYLE NO.20266 150V 80°C
AWG28 (7/0.127〔cables/mm〕)

Note: Always perform wiring correctly by confirming the pin locations, connector numbers, label numbers, marker tube numbers, etc.

●-F200□ special cable assembly

FMA-200W-□-□



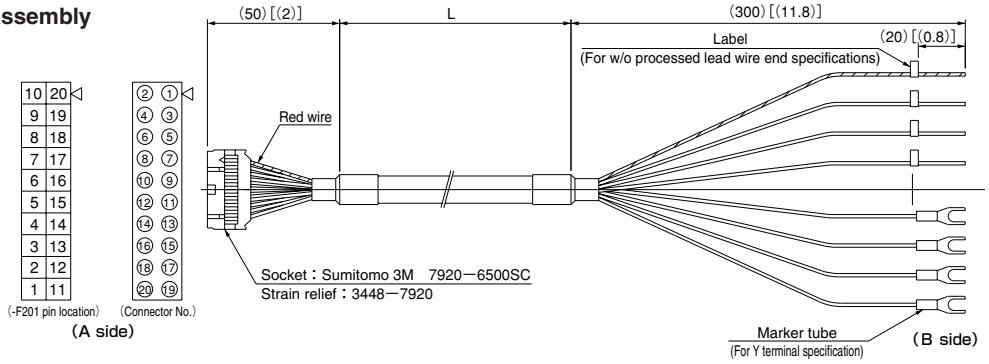
A side	-F200 pin location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Connector No.	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱	⑲	⑳
B side	Label and marker tube No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	—	—	+	+

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JA Series Split Manifold Plug-in Type Cable Assemblies by Wiring Specification mm [in.]

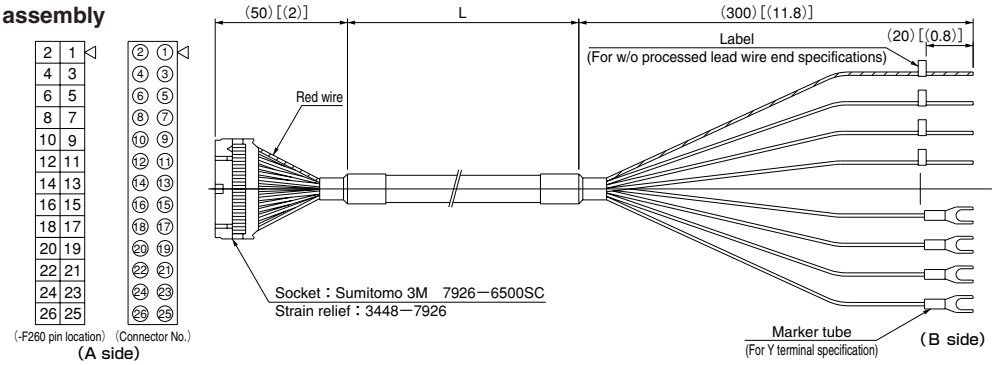
●-F201□ special cable assembly
FMA-201W-□-□

Note: Caution should be exercised that there are differences between the pin location numbers and connector numbers.



	-F201 pin location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A side	Connector No.	⑳	⑱	⑯	⑭	⑫	⑩	⑧	⑥	④	②	⑲	⑰	⑮	⑬	⑪	⑨	⑦	⑤	③	①
B side	Label and marker tube No.	1	2	3	4	5	6	7	8	—	+	9	10	11	12	13	14	15	16	—	+

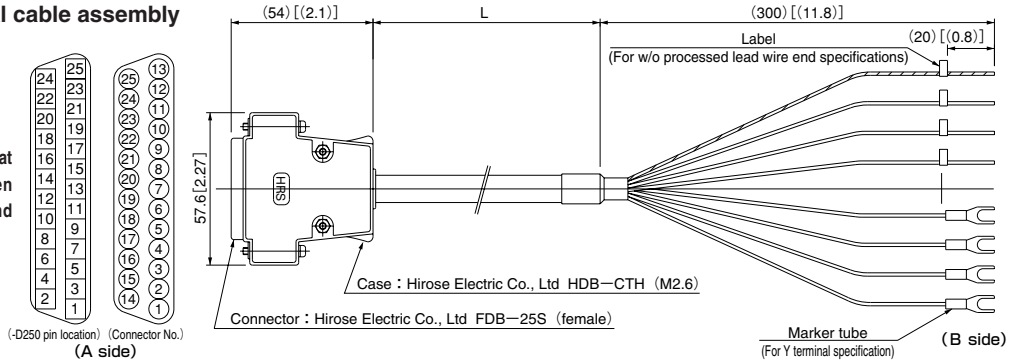
●-F260□ special cable assembly
FMA-260W-□-□



	-F260 pin location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
A side	Connector No.	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱	⑲	⑳	㉑	㉒	㉓	㉔	㉕	㉖
B side	Label and marker tube No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			—	—	+	+

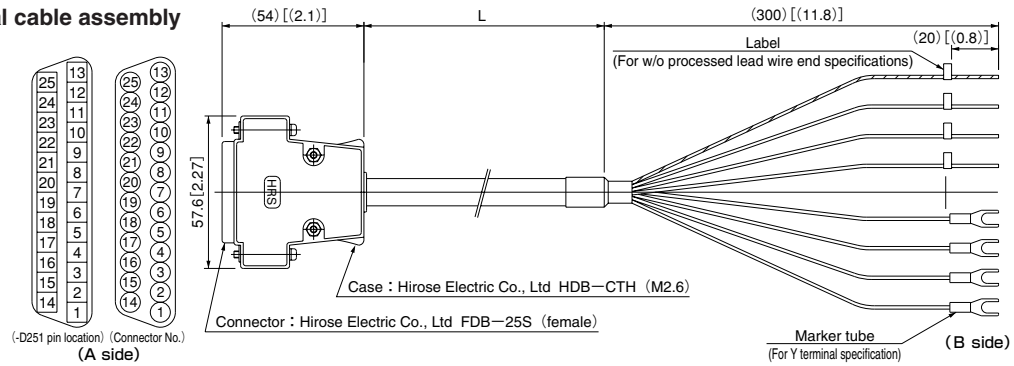
●-D250, -D250E special cable assembly
FMA-250W-□-□

Note: Caution should be exercised that there are differences between the pin location numbers and connector numbers.



	-D250 pin location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
A side	Connector No.	①	⑭	②	⑮	③	⑯	④	⑰	⑤	⑱	⑥	⑲	⑦	⑳	⑧	㉑	⑨	㉒	⑩	㉓	⑪	㉔	⑫	㉕	⑬
B side	Label and marker tube No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				—	—	—	+	+	+

●-D251, -D251E special cable assembly
FMA-251W-□-□



	-D251 pin location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
A side	Connector No.	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱	⑲	⑳	㉑	㉒	㉓	㉔	㉕
B side	Label and marker tube No.	1	2	3	4	5	6	7	8	9	10		—	—	11	12	13	14	15	16	17	18	19	20	+	+

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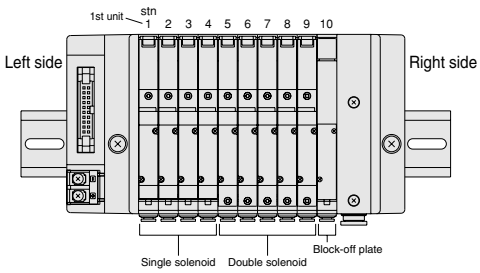
Pin Numbers and Corresponding Solenoids (For Split Manifold Plug-in Type)

The examples below show the relationship between the split manifold pin numbers and the corresponding solenoids.
The installation examples show the maximum numbers of outputs in use.

Flat cable connector (20-pin)

Wiring specification **-F200**□ (Maximum 16 outputs)

Example 1 **JAM10PJ-JR-F200-D4** **stn. 1～4 JA10A5-J4-D4**
stn. 5～9 JA10A6-J4-D4
stn. 10 JABPP-J4



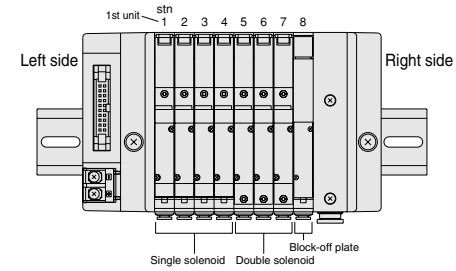
Number of units : 10 units
Wiring specification : **-F200**
Wiring connection specification :
Blank (packed wiring)

(TOP VIEW) Triangle mark ▽

19	17	15	13	11	9	7	5	3	1
20	18	16	14	12	10	8	6	4	2

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 **JAM8PJ-JR-F200-D-D4** **stn. 1～4 JA10A5-J4-D4**
stn. 5～7 JA10A6-J4-D4
stn. 8 JABPP-J4



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

(TOP VIEW) Triangle mark ▽

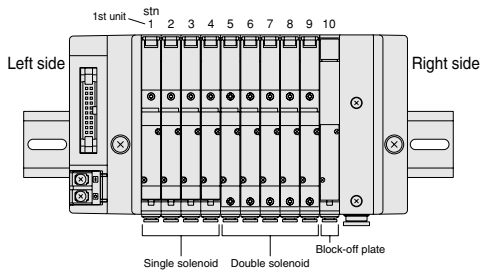
19	17	15	13	11	9	7	5	3	1
20	18	16	14	12	10	8	6	4	2

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 16 outputs)

Example 1 **JAM10PJ-JR-F201-D4** **stn. 1～4 JA10A5-J4-D4**
stn. 5～9 JA10A6-J4-D4
stn. 10 JABPP-J4



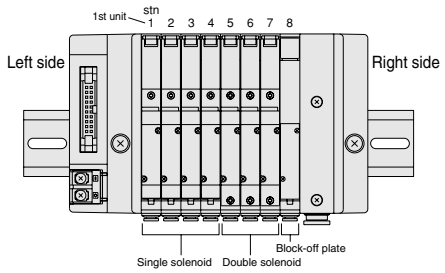
Number of units : 10 units
Wiring specification : **-F201**
Wiring connection specification :
Blank (packed wiring)

(TOP VIEW) Triangle mark ▽

11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

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 **JAM8PJ-JR-F201-D-D4** **stn. 1～4 JA10A5-J4-D4**
stn. 5～7 JA10A6-J4-D4
stn. 8 JABPP-J4



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

(TOP VIEW) Triangle mark ▽

11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

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 a reference.

Notes: 1. In the figures, the valve numbers 1A, 1B, 2A, 2B··· show the stn. numbers, while the letters A and B show the A or B side of the solenoid.
2. The stn. numbers are counted from the left, 1, 2···, with the solenoid on top and the valve outlet ports in front.
3. When selecting wiring connection specification **-D**, all wiring is double wiring, regardless of valve specifications.
4. The wiring for the block-off plate is normally assigned as double wiring (2 pins to 1 unit), regardless of the wiring specifications. However, when **-S** is designated as the block-off plate wiring specification, the block-off plate wiring of the station is changed to the single solenoid.
5. Connector pin numbers are assigned for the sake of convenience. Use the ▽ mark as a reference.

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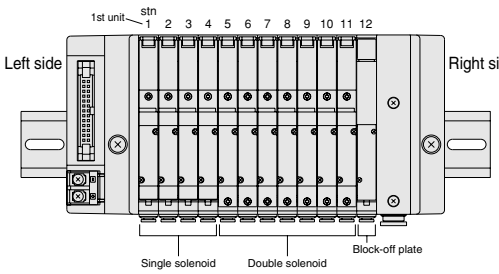
Pin Numbers and Corresponding Solenoids (For Split Manifold Plug-in Type)

The examples below show the relationship between the split manifold pin numbers and the corresponding solenoids.
The installation examples show the maximum numbers of outputs in use.

Flat cable connector (26-pin)

●Wiring specification **-F260**□ (Maximum 20 outputs)

Example 1 **JAM12PJ-JR-F260-D4** **stn. 1～4 JA10A5-J4-D4**
stn. 5～11 JA10A6-J4-D4
stn. 12 JABPP-J4



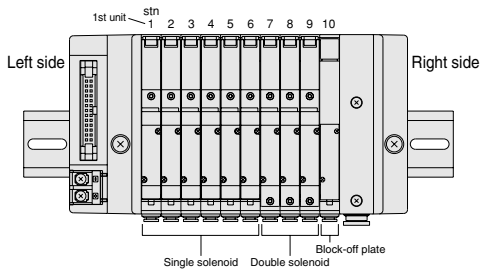
Number of units : 12 units
Wiring specification : **-F260**
Wiring connection specification :
Blank (packed wiring)

(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 **JAM10PJ-JR-F260-D-D4** **stn. 1～6 JA10A5-J4-D4**
stn. 7～9 JA10A6-J4-D4
stn. 10 JABPP-J4



Number of units : 10 units
Wiring specification : **-F260**
Wiring connection specification :
-D (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. In the figures, the valve numbers 1A, 1B, 2A, 2B··· show the stn. numbers, while the letters A and B show the A or B side of the solenoid.
2. The stn. numbers are counted from the left, 1, 2···, with the solenoid on top and the valve outlet ports in front.
3. When selecting wiring connection specification **-D**, all wiring is double wiring, regardless of valve specifications.
4. The wiring for the block-off plate is normally assigned as double wiring (2 pins to 1 unit), regardless of the wiring specifications. However, when **-S** is designated as the block-off plate wiring specification, the block-off plate wiring of the station is changed to the single solenoid.
5. Connector pin numbers are assigned for the sake of convenience. Use the ▽ mark as a reference.

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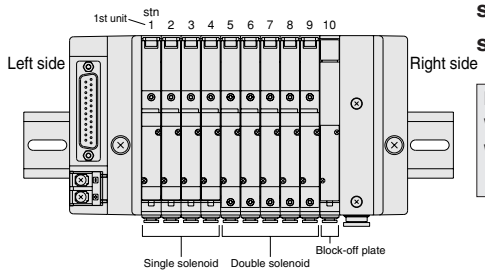
The examples below show the relationship between the split manifold pin numbers and the corresponding solenoids.
The installation examples show the maximum numbers of outputs in use.

D-sub connector (25-pin)

●Wiring specification **-D250**□ (Maximum 16 outputs)

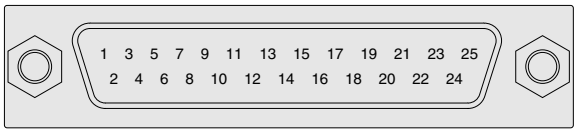
Caution: For the sake of convenience, the connector pins are assigned based on the solenoid valve wiring sequence, which differs from the pin locations and pin numbers (marked) prescribed in JIS-X5101 for the data circuit-terminating equipment (DCE).

Example 1 **JAM10PJ-JR-D250-D4** **stn. 1～4 JA10A5-J4-D4**
stn. 5～9 JA10A6-J4-D4
stn. 10 JABPP-J4



Number of units : 10 units
Wiring specification : **-D250**
Wiring connection specification :
Blank (packed wiring)

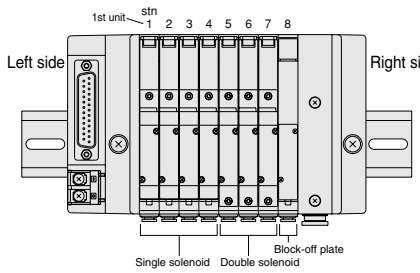
(TOP VIEW)



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			−	+	+

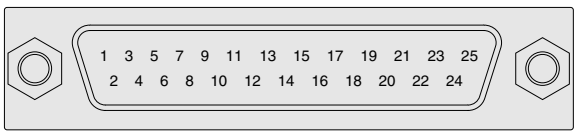
Pin No.	2	4	6	8	10	12	14	16	18	20	22	24
Valve No.	2A	4A	5B	6B	7B	8B	9B	10B		−	−	+

Example 2 **JAM8PJ-JR-D250-D-D4** **stn. 1～4 JA10A5-J4-D4**
stn. 5～7 JA10A6-J4-D4
stn. 8 JABPP-J4



Number of units : 8 units
Wiring specification : **-D250**
Wiring connection specification :
-D (double wiring)

(TOP VIEW)



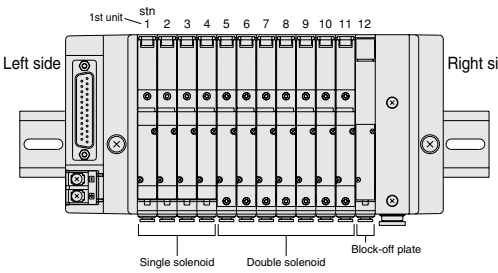
Pin No.	1	3	5	7	9	11	13	15	17	19	21	23	25
Valve No.	1A	2A	3A	4A	5A	6A	7A	8A			−	+	+

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)

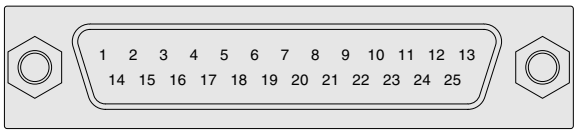
●Wiring specification **-D251**□ Pin locations based on JIS specification (Maximum 20 outputs)

Example 1 **JAM12PJ-JR-D251-D4** **stn. 1～4 JA10A5-J4-D4**
stn. 5～11 JA10A6-J4-D4
stn. 12 JABPP-J4



Number of units : 12 units
Wiring specification : **-D251**
Wiring connection specification :
Blank (packed wiring)

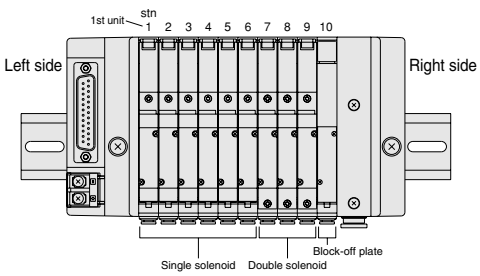
(TOP VIEW)



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		−	−

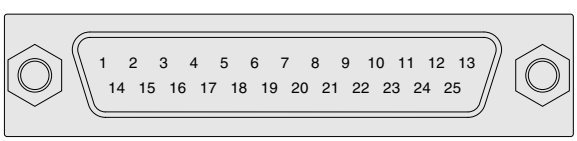
Pin No.	14	15	16	17	18	19	20	21	22	23	24	25
Valve No.	8A	8B	9A	9B	10A	10B	11A	11B	12A	12B	+	+

Example 2 **JAM10PJ-JR-D251-D-D4** **stn. 1～6 JA10A5-J4-D4**
stn. 7～9 JA10A6-J4-D4
stn. 10 JABPP-J4



Number of units : 10 units
Wiring specification : **-D251**
Wiring connection specification :
-D (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. In the figures, the valve numbers 1A, 1B, 2A, 2B··· show the stn. numbers, while the letters A and B show the A or B side of the solenoid.
2. The stn. numbers are counted from the left, 1, 2···, with the solenoid on top and the valve outlet ports in front.
3. When selecting wiring connection specification **-D**, all wiring is double wiring, regardless of valve specifications.
4. The wiring for the block-off plate is normally assigned as double wiring (2 pins to 1 unit), regardless of the wiring specifications. However, when **-S** is designated as the block-off plate wiring specification, the block-off plate wiring of the station is changed to the single solenoid.

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Pin Numbers and Corresponding Solenoids (For Split Manifold Plug-in Type)

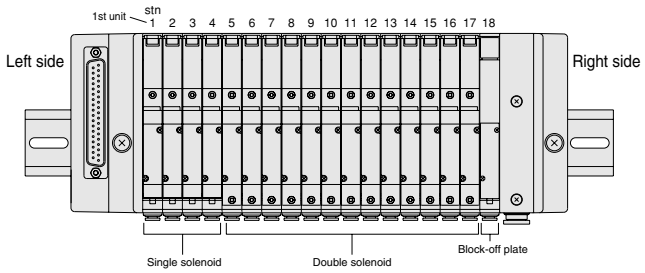
The examples below show the relationship between the split manifold pin numbers and the corresponding solenoids.
The installation examples show the maximum numbers of outputs in use.

D-sub connector (37-pin)

●Wiring specification **-D370U** (Maximum 32 outputs)

Caution: For the sake of convenience, the connector pins are assigned based on the solenoid valve wiring sequence, which differs from the pin locations and pin numbers (marked) prescribed in JIS-X5103 for the data circuit-terminating equipment (DCE).

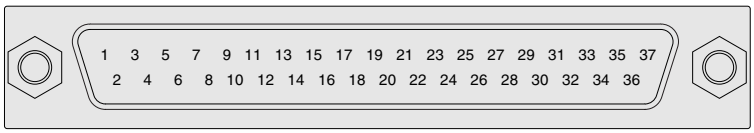
Example 1



JAM18PJ-JR-D370U-D4 **stn.1～4 JA10A5-J4-D4**
stn.5～17 JA10A6-J4-D4
stn.18 JABPP-J4

Number of units : 18 units
Wiring specification : **-D370U**
Wiring connection specification :
Blank (packed wiring)

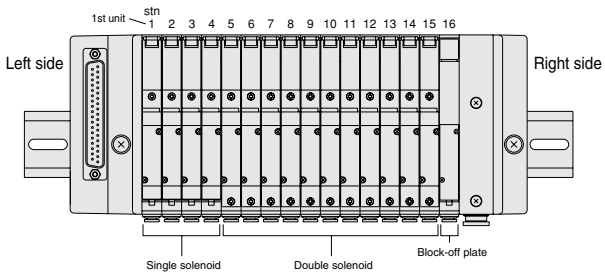
(TOP VIEW)



Pin No.	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37
Valve No.	1A	3A	5A	6A	7A	8A	9A	10A	11A	12A	13A	14A	15A	16A	17A	18A			+

Pin No.	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Valve No.	2A	4A	5B	6B	7B	8B	9B	10B	11B	12B	13B	14B	15B	16B	17B	18B		+

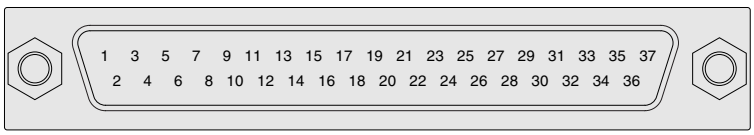
Example 2



JAM16PJ-JR-D370U-D-D4 **stn.1～4 JA10A5-J4-D4**
stn.5～15 JA10A6-J4-D4
stn.16 JABPP-J4

Number of units : 16 units
Wiring specification : **-D370U**
Wiring connection specification :
-D (double wiring)

(TOP VIEW)



Pin No.	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37
Valve No.	1A	2A	3A	4A	5A	6A	7A	8A	9A	10A	11A	12A	13A	14A	15A	16A			+

Pin No.	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Valve No.	1B	2B	3B	4B	5B	6B	7B	8B	9B	10B	11B	12B	13B	14B	15B	16B		+

Notes: 1. In the figures, the valve numbers 1A, 1B, 2A, 2B··· show the stn. numbers, while the letters A and B show the A or B side of the solenoid.
2. The stn. numbers are counted from the left, 1, 2···, with the solenoid on top and the valve outlet ports in front.
3. When selecting wiring connection specification **-D**, all wiring is double wiring, regardless of valve specifications.
4. The wiring for the block-off plate is normally assigned as double wiring (2 pins to 1 unit), regardless of the wiring specifications. However, when **-S** is designated as the block-off plate wiring specification, the block-off plate wiring of the station is changed to the single solenoid.

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Solenoid Valves JA Series

Specifications and Dimensions

Specifications — 213
Dimensions of Single Valve Unit — 216
Dimensions of Monoblock Manifold — 218
Dimensions of Split Manifold
Non-Plug-in Type — 219
Dimensions of Split Manifold Plug-in Type — 220
Dimensions of Serial Transmission Type — 227

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JA SERIES SPECIFICATIONS

Specifications

Basic Models and Functions

Item \ Basic model	JA10□A1 JA10□A2 JA10□A3 JA10□A4	JA10□A5	JA10□A6	JA10□A7 JA10□A8 JA10□A9	JA10□AA JA10□AB JA10□AC
Number of positions	2 positions			3 positions	4 positions
Number of ports	2, 3 ports	5 ports			Tandem 3 ports
Valve function	Single solenoid NC, NO	Single solenoid	Double solenoid	Closed center, Exhaust center, Pressure center	NC/NC, NO/NO, NC/NO

Remark: For the optional specifications and order codes, see p.188.

Specifications

Item \ Basic model	JA10□A1 JA10□A2 JA10□A3 JA10□A4	JA10□A5	JA10□A6	JA10□A7 JA10□A8 JA10□A9	JA10□AA JA10□AB JA10□AC
Media	Air				
Operation type	Internal pilot type				
Effective area〔Cv〕Note1 mm²	3.5〔0.19〕			3.4〔0.19〕	3.5〔0.19〕
Port size Note2	φ4, φ6 fitting, 1/8, 1/4 inch fitting, Rc1/8				
Lubrication	Not required				
Operating pressure range MPa {kgf/cm²} [psi.]	0.2～0.7 {2～7.1} ［29～102］				
Proof pressure MPa {kgf/cm²} [psi.]	1.05 {10.7} ［152］				
Response time (ON/OFF)Note 3 ms	15/15 (15/20) or below		15 (20) or below	15/25 (15/35) or below	15/20 (15/30) or below
Maximum operating frequency Hz	5				
Minimum time to energize for self holding Note4 ms	—		50	—	
Operating temperature range (atmosphere and media) °C [°F]	5～50[41～122]				
Shock resistance m/s²{G}	245 {25}				
Mounting direction	Any				

Notes: 1. For details, see the effective area on p.214.
2. For details, see the port size on p.214.
3. Values when air pressure is 0.5MPa [73psi.]. Values in parentheses ( ) are for the low-current specification. In addition, the values for the 3-position valves are switching time from neutral position.
4. For double solenoid valve.

Solenoid Specifications

Item \ Rated voltage			DC24V (Standard specification)	DC24V (low current specification)	DC12V (Standard specification)
Operating voltage range V			21.6～26.4 (24±10%)	21.6～26.4 (24±10%)	10.8～13.2 (12±10%)
Standard	Current (when rated voltage is applied) mA(r.m.s)		21	—	42
Standard	Power consumption W		0.5	—	0.5
Low current specification	Current (when rated voltage is applied)	Starting mA	—	21	—
Low current specification	Current (when rated voltage is applied)	Holding mA	—	10.5	—
Low current specification	Power consumption	Starting W	—	0.5	—
Low current specification	Power consumption	Holding W	—	0.25	—
Low current specification	Start-up time (standard time) ms		—	50	—
Allowable leakage current mA			1.0		
Insulation resistance MΩ			Over 100 (value at DC500V megger)		
Color of LED indicator			14 (SA) : Red, 12(SB) : Green		
Surge suppression (as standard)			Surge absorption transistor	Flywheel diode	Surge absorption transistor

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Port Size

Piping specification \ Port	2 (B), 4(A)	1(P)	3, 5(R)
With sub-base	Rc1/8	Rc1/8	Rc1/8
Monoblock manifold	ϕ 4 [0.157in.] or ϕ 6 [0.236in.] fitting	Rc1/8	Rc1/8
Split manifold	ϕ 4 [0.157in.], ϕ 6 [0.236in.] fitting, or 1/8, 1/4 inch fitting	ϕ 8 [0.315in.] fitting, or 1/4, 3/8 inch fitting	ϕ 8 [0.315in.] fitting, or 1/4, 3/8 inch fitting or muffler

Effective Area〔Cv〕

●When used as a single unit

mm²

Basic model	Effective area〔Cv〕
JA10□A1-25 **JA10□A2-25** **JA10□A3-25** **JA10□A4-25** **JA10□A5-25** **JA10□A6-25**	3.2〔0.18〕
JA10□A7-25 **JA10□A8-25** **JA10□A9-25**	3.1〔0.17〕
JA10□AA-25 **JA10□AB-25** **JA10□AC-25**	3.2〔0.18〕

●When mounted on a manifold

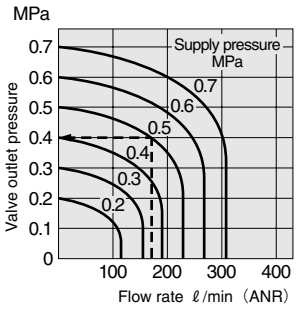
mm²〔Cv〕

Manifold model / Valve model	**JAM□AJ** Outlet port ϕ4 [0.157in.] fitting	**JAM□AJ** Outlet port ϕ6 [0.236in.] fitting	**JAM□N(P)(S)J** Outlet port ϕ 4 or 1/8 inch fitting	**JAM□N(P)(S)J** Outlet port ϕ 6 or 1/4 inch fitting
JA10□A1 **JA10□A2** **JA10□A3** **JA10□A4** **JA10□A5** **JA10□A6**	2.8 [0.16]	3.0 [0.17]	3.2 [0.18]	3.5 [0.19]
JA10□A7 **JA10□A8** **JA10□A9**	2.7 [0.15]	2.9 [0.16]	3.1 [0.17]	3.4 [0.19]
JA10□AA **JA10□AB** **JA10□AC**	2.8 [0.16]	3.0 [0.17]	3.2 [0.18]	3.5 [0.19]

Notes: 1. When using the back pressure prevention valve, the effective area of OUT-EXH is reduced to 2.5mm²〔Cv=0.14〕regardless of the manifold specifications.
2. When the individual air supply spacer is used, effective area decreases about 20%.

Flow Rate

JA10□



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 170 ℓ /min [6ft³/min.] (ANR), the valve outlet pressure becomes 0.4MPa [58psi.].

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Mass

Single Valve Unit Mass

g [oz.]

Options / Valve specification	Wiring specification			Additional mass
	Blank **PN**	**PS** **MS**	**PS3** **MS3**	**25** (with sub-base)
JA10□A1～A4	36 [1.27]	40 [1.41]	61 [2.15]	51 [1.80]
JA10□A5				48 [1.69]
JA10□A6	44 [1.55]	49 [1.73]	81 [2.86]	
JA10□A7～A9	46 [1.62]	51 [1.80]	83 [2.93]	
JA10□AA～AC	44 [1.55]	49 [1.73]	81 [2.86]	

Monoblock Manifold Mass

g [oz.]

Monoblock manifold	Mass calculation of each unit (n: number of units)		Additional mass
	Manifold outlet port specification		
	-J4K (ϕ4 fitting)	**-J6K** (ϕ6 fitting)	
Monoblock Manifold **AJ** type	(33.5×n) [(1.18×n)]	(30.5×n) [(1.08×n)]	79 [2.79]

Block-off plate : 5g [0.18oz.]

Split Manifold Non-Plug-in Type Mass

g [oz.]

Split manifold	Mass calculation of each unit (n: number of units)		Additional mass				
	Manifold outlet port specification		Piping block				End block
	-J4 (ϕ4 fitting) **-J1/8** (1/8 inch fitting) **-J1/4** (1/4 inch fitting)	**-J6** (ϕ6 fitting)	With fitting		Built-in muffler		
			ϕ8 fitting 1/4 inch fitting	3/8 inch fitting	ϕ8 fitting 1/4 inch fitting	3/8 inch fitting	
Non-plug-in type	(25.5×n) [(0.90×n)]	(21.5×n) [(0.76×n)]	67 [2.36]	98 [3.46]	66 [2.33]	83 [2.93]	126 [4.44]

Block-off plate : 5g [0.18oz.]

Split Manifold Plug-in Type Mass

g [oz.]

Split manifold	Mass calculation of each unit (n: number of units)		Additional mass							
	Manifold outlet port specification		Piping block				Wiring block			End block
	-J4 (ϕ4 fitting) **-J1/8** (1/8 inch fitting) **-J1/4** (1/4 inch fitting)	**-J6** (ϕ6 fitting)	With fitting		Built-in muffler		**-F20□**	**-F26□**	**-D25□**	**-D370U**	
			ϕ8 fitting 1/4 inch fitting	3/8 inch fitting	ϕ8 fitting 1/4 inch fitting	3/8 inch fitting					
Plug-in type	(28×n) [(0.99×n)]	(24×n) [(0.85×n)]	67 [2.36]	98 [3.46]	66 [2.33]	83 [2.93]	55 [1.94]	56 [1.98]	58 [2.05]	155 [5.47]	123 [4.34]

Block-off plate : 5.5g [0.19oz.]

Split Manifold Serial Transmission Type Mass

g [oz.]

Split manifold	Mass calculation of each unit (n: number of units)		Additional mass							
	Manifold outlet port specification		Piping block				Serial transmission block			End block
	-J4 (ϕ4 fitting) **-J1/8** (1/8 inch fitting) **-J1/4** (1/4 inch fitting)	**-J6** (ϕ6 fitting)	With fitting		Built-in muffler		**-A□**	**-B1**	**-D1**	
			ϕ8 fitting 1/4 inch fitting	3/8 inch fitting	ϕ8 fitting 1/4 inch fitting	3/8 inch fitting				
Serial transmission type	(28×n) [(0.99×n)]	(24×n) [(0.85×n)]	67 [2.36]	98 [3.46]	66 [2.33]	83 [2.93]	120 [4.23]	129 [4.55]	126 [4.44]	123 [4.34]

Block-off plate : 5.5g [0.19oz.]

Calculation example : **JAM8SJ-JR-B1**
stn.1～8 JA10A6-J6-D4
(44×8)+(24×8)+67+129+123=863g
[(1.55×8)+(0.85×8)+2.36+4.55+4.34=30.45oz.]

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Dimensions of JA Series Single Valve Unit (mm)

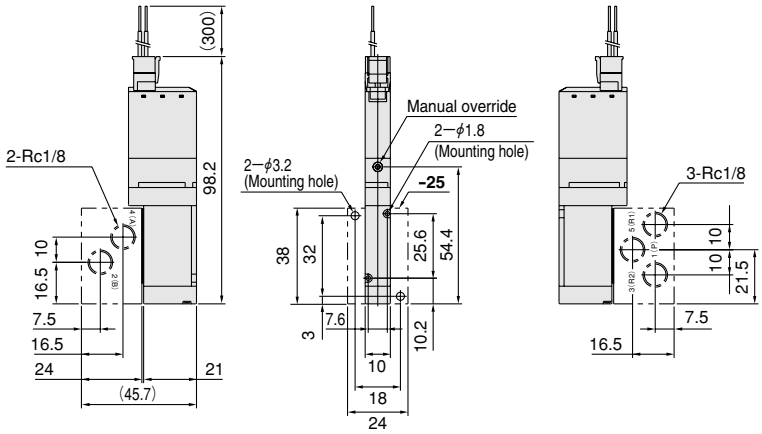
2-, 3-port, single solenoid

JA10□A1-□-PS
JA10□A2-□-PS
JA10□A3-□-PS
JA10□A4-□-PS

S type plug connector

Caution

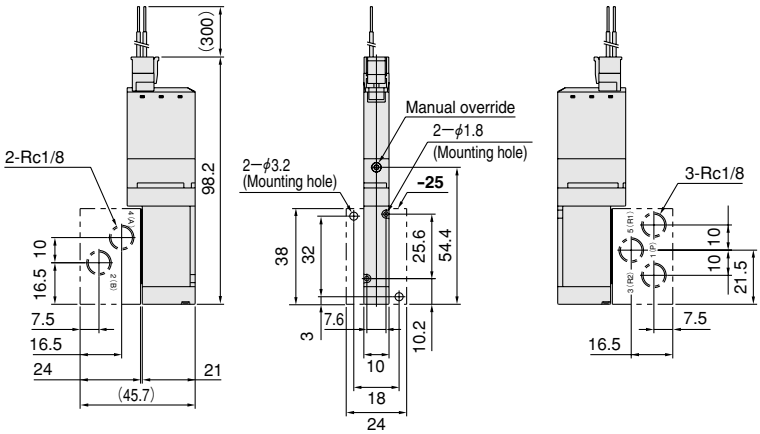
A1: 2(B) plugged in 2-port normally closed type
A2: 4(A) plugged in 2-port normally open type
A3: 2(B) plugged in 3-port normally closed type
A4: 4(A) plugged in 3-port normally open type



5-port, single solenoid

JA10□A5-□-PS

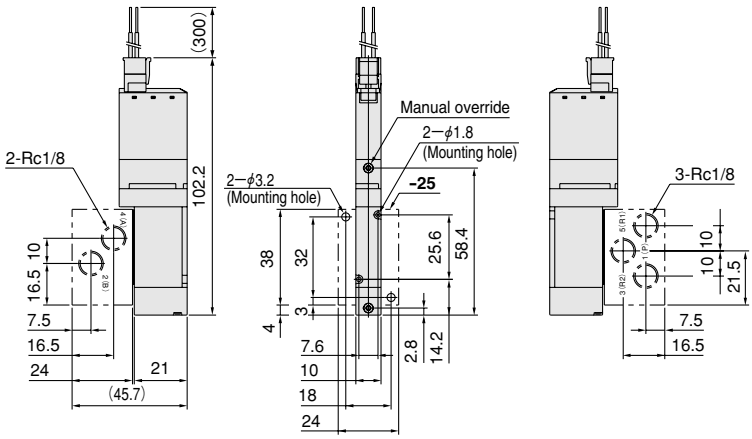
S type plug connector



5-port, double solenoid

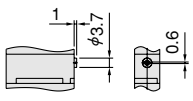
JA10□A6-□-PS

S type plug connector

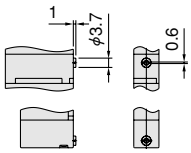


Options

●Locking protruding type manual override : **-83**



For single solenoid



For double solenoid

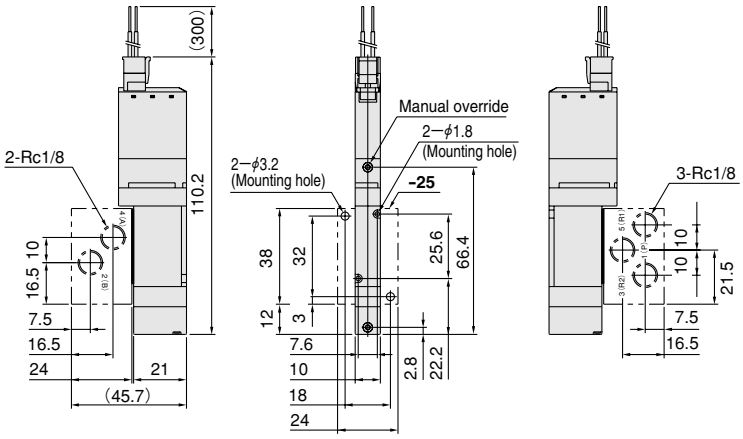
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Dimensions of JA Series Single Valve Unit (mm)

5-port, 3-position

JA10□A7-□-PS
JA10□A8-□-PS
JA10□A9-□-PS

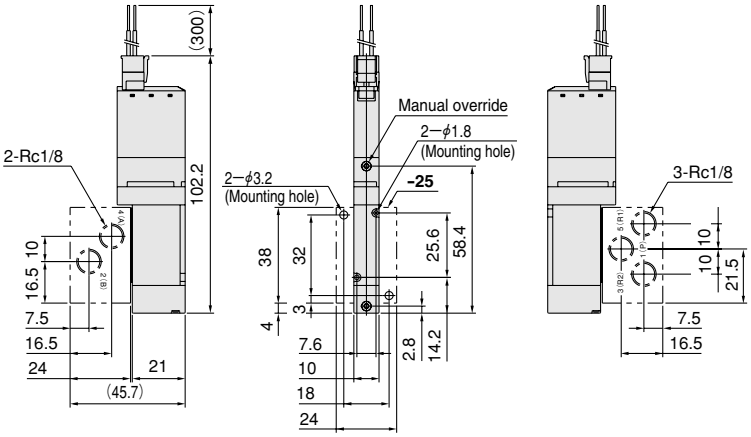
S type plug connector



Tandem 3-port, 4-position

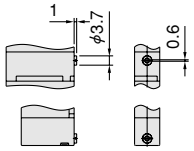
JA10□AA-□-PS
JA10□AB-□-PS
JA10□AC-□-PS

S type plug connector



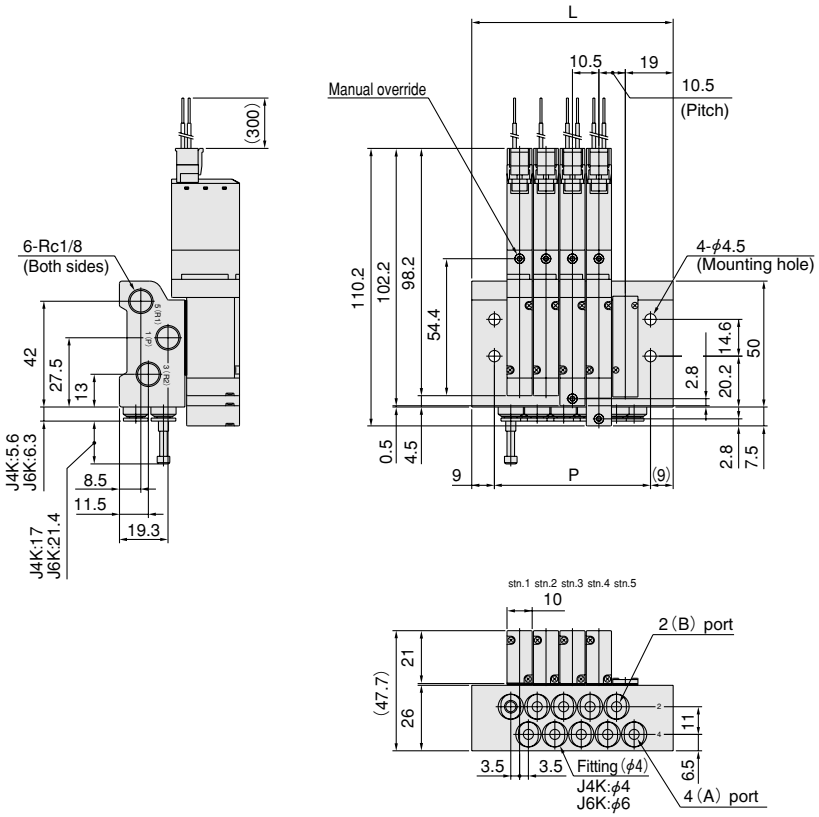
Option

●Locking protruding type manual override : **-83**



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JAM□AJ



〔Installation example〕

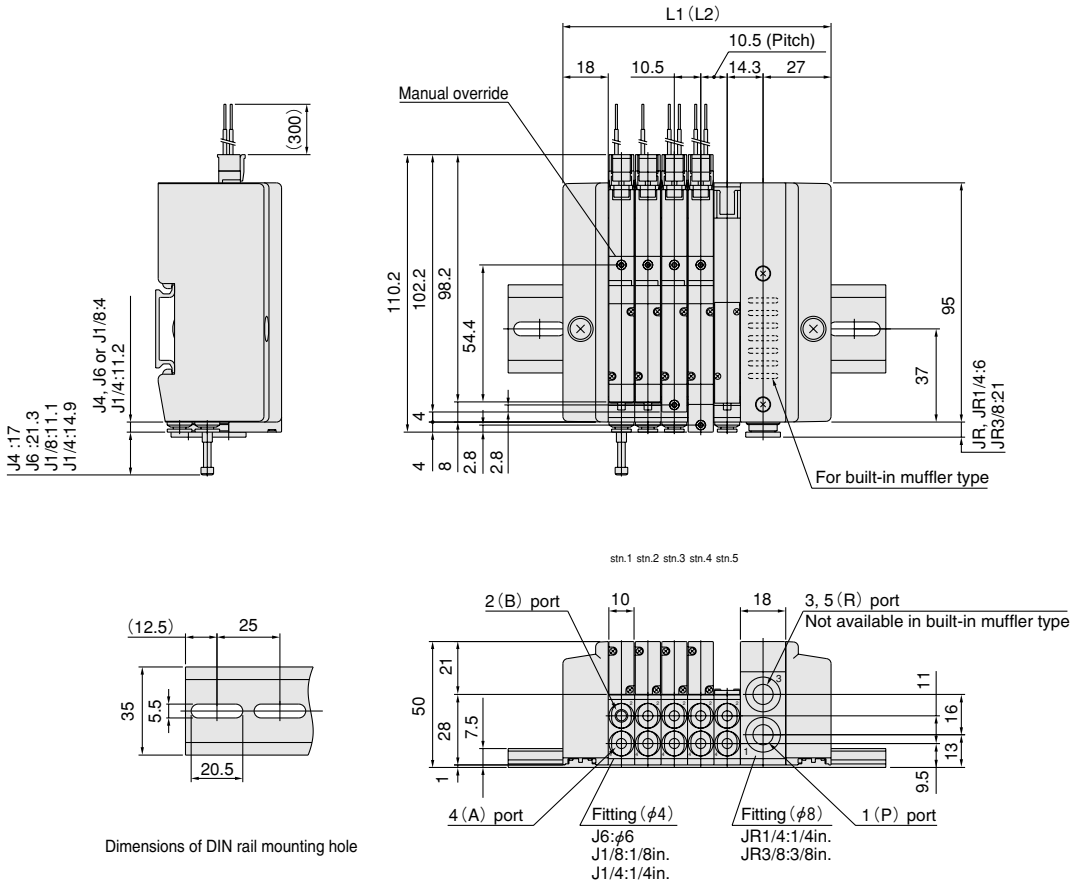
JAM5AJ
stn.1 JA10A1-PS-J4K-D4
stn.2 JA10A5-PS-J4K-D4
stn.3 JA10A6-PS-J4K-D4
stn.4 JA10A7-PS-J4K-D4
stn.5 JABP-J4K

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

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JAM□NJ



〔Installation example〕

JAM5NJ-JR
stn.1 JA10A1-PS-J4-D4
stn.2 JA10A5-PS-J4-D4
stn.3 JA10A6-PS-J4-D4
stn.4 JA10A7-PS-J4-D4
stn.5 JABP-J4

Unit dimensions

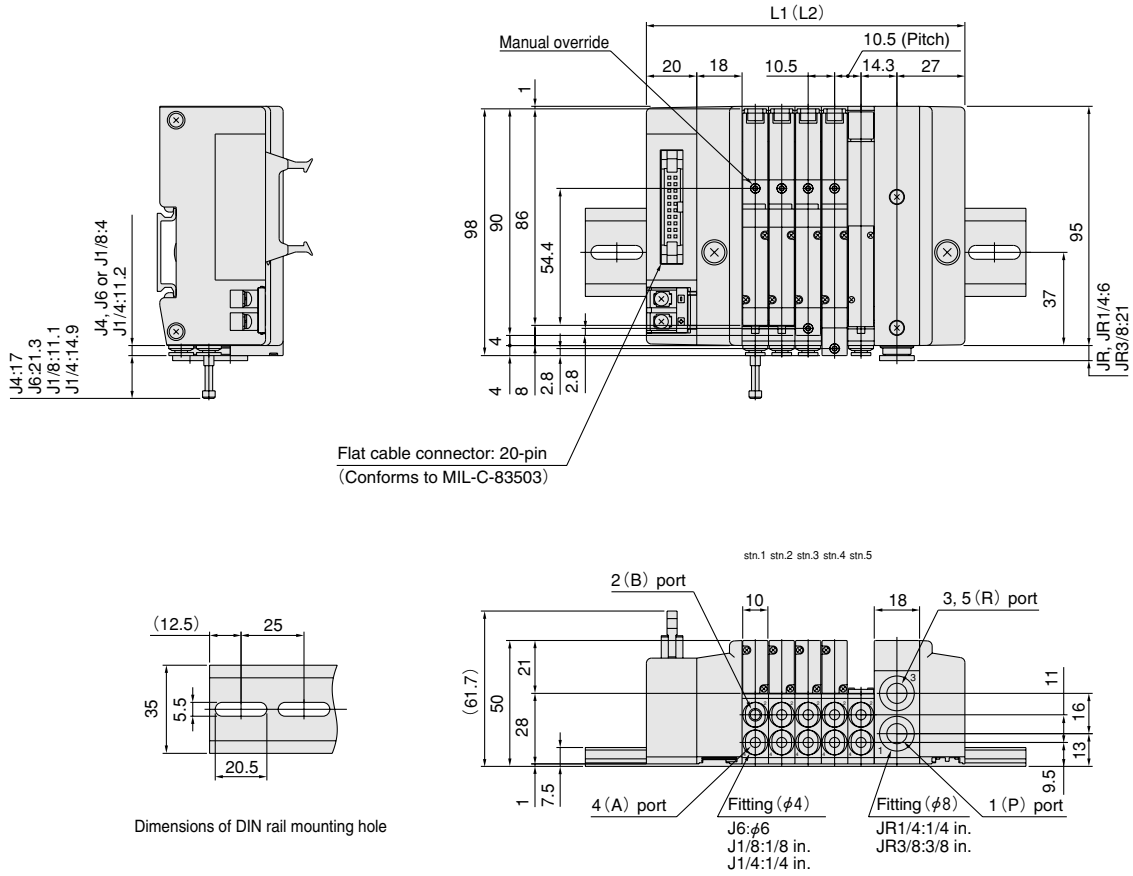
Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	75.0	125	93.0	125
3	85.5	125	103.5	150
4	96.0	125	114.0	150
5	106.5	150	124.5	175
6	117.0	150	135.0	175
7	127.5	175	145.5	175
8	138.0	175	156.0	200
9	148.5	200	166.5	200
10	159.0	200	177.0	225
11	169.5	200	187.5	225
12	180.0	225	198.0	250
13	190.5	225	208.5	250
14	201.0	250	219.0	250
15	211.5	250	229.5	275
16	222.0	275	240.0	275
17	232.5	275	250.5	300
18	243.0	275	261.0	300
19	253.5	300	271.5	325
20	264.0	300	282.0	325

Note : When using two piping blocks.

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JAM□PJ

Flat cable connector 20-pin
Connector on upper side specification



〔Installation example〕
JAM5PJ-JR-F20□-D4
stn.1 JA10A1-J4-D4
stn.2 JA10A5-J4-D4
stn.3 JA10A6-J4-D4
stn.4 JA10A7-J4-D4
stn.5 JABPP-J4

Unit dimensions

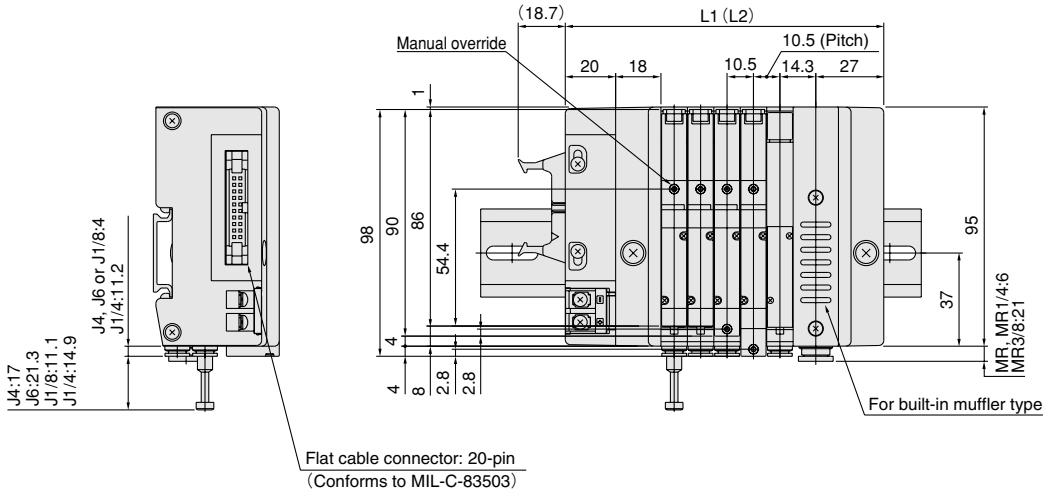
Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0	150	113.0	175
3	105.5	175	123.5	175
4	116.0	175	134.0	200
5	126.5	175	144.5	200
6	137.0	200	155.0	200
7	147.5	200	165.5	225
8	158.0	225	176.0	225
9	168.5	225	186.5	250
10	179.0	225	197.0	250
11	189.5	250	207.5	275
12	200.0	250	218.0	275
13	210.5	275	228.5	275
14	221.0	275	239.0	300
15	231.5	300	249.5	300
16	242.0	300	260.0	325

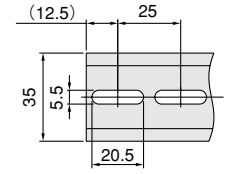
Note : When using two piping blocks.

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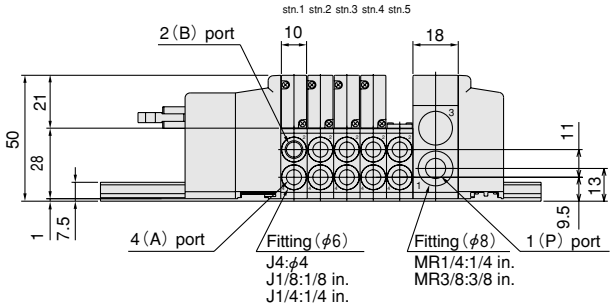
JAM□PJ

Flat cable connector 20-pin
Connector on side specification





Dimensions of DIN rail mounting hole



〔Installation example〕
JAM5PJ-MR-F20□E-D4
stn.1 JA10A1-J6-D4
stn.2 JA10A5-J6-D4
stn.3 JA10A6-J6-D4
stn.4 JA10A7-J6-D4
stn.5 JABPP-J6

Unit dimensions

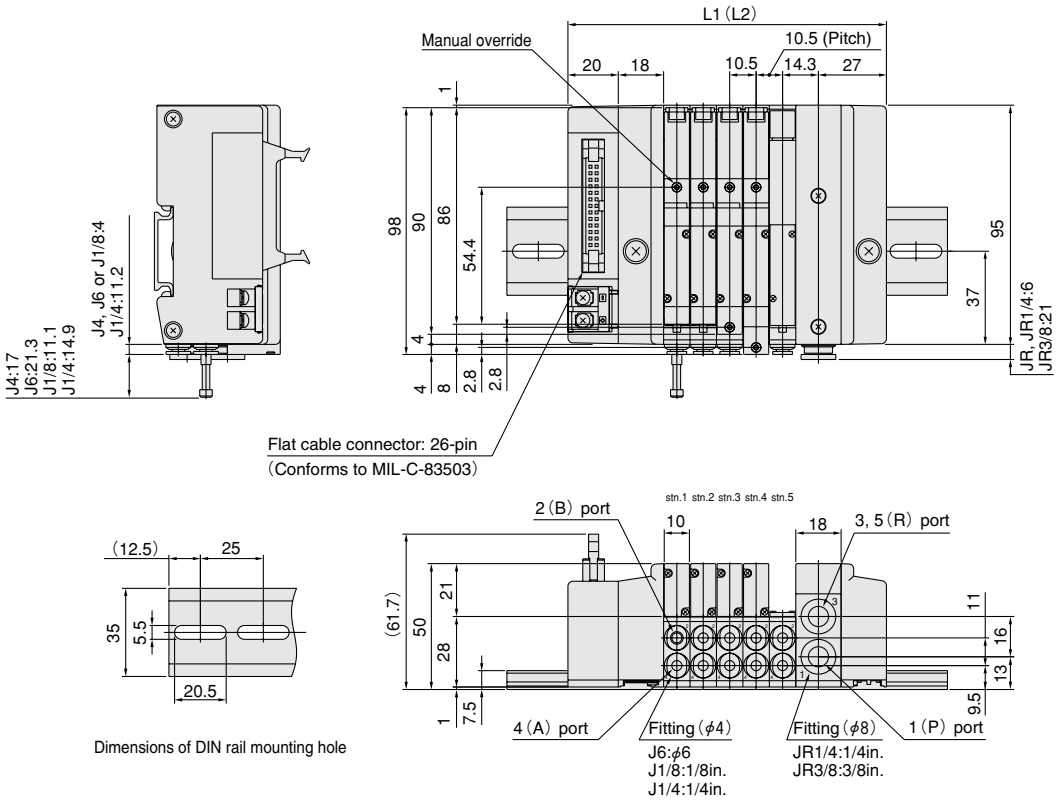
Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0	150	113.0	175
3	105.5	175	123.5	175
4	116.0	175	134.0	200
5	126.5	175	144.5	200
6	137.0	200	155.0	200
7	147.5	200	165.5	225
8	158.0	225	176.0	225
9	168.5	225	186.5	250
10	179.0	225	197.0	250
11	189.5	250	207.5	275
12	200.0	250	218.0	275
13	210.5	275	228.5	275
14	221.0	275	239.0	300
15	231.5	300	249.5	300
16	242.0	300	260.0	325

Note : When using two piping blocks.

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JAM□PJ

Flat cable connector 26-pin
Connector on upper side specification



Dimensions of DIN rail mounting hole

〔Installation example〕

JAM5PJ-JR-F260-D4
stn.1 JA10A1-J4-D4
stn.2 JA10A5-J4-D4
stn.3 JA10A6-J4-D4
stn.4 JA10A7-J4-D4
stn.5 JABPP-J4

Unit dimensions

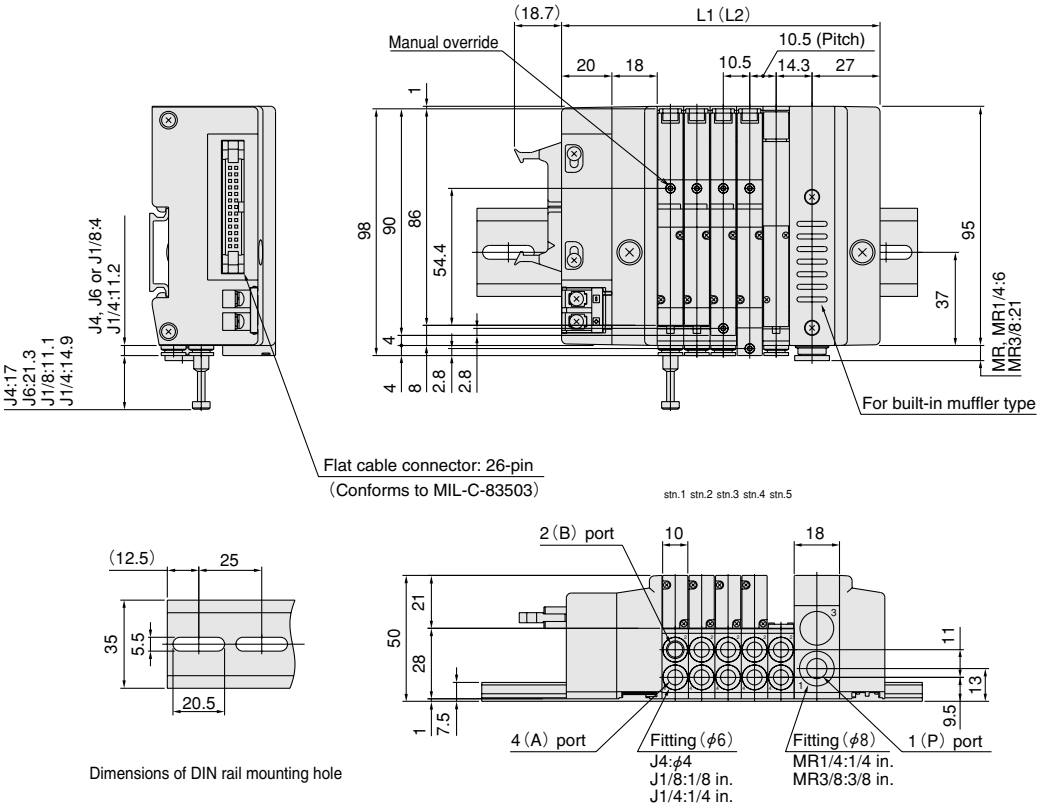
Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0	150	113.0	175
3	105.5	175	123.5	175
4	116.0	175	134.0	200
5	126.5	175	144.5	200
6	137.0	200	155.0	200
7	147.5	200	165.5	225
8	158.0	225	176.0	225
9	168.5	225	186.5	250
10	179.0	225	197.0	250
11	189.5	250	207.5	275
12	200.0	250	218.0	275
13	210.5	275	228.5	275
14	221.0	275	239.0	300
15	231.5	300	249.5	300
16	242.0	300	260.0	325
17	252.5	300	270.5	325
18	263.0	325	281.0	350
19	273.5	325	291.5	350
20	284.0	350	302.0	350

Note : When using two piping blocks.

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JAM□PJ

Flat cable connector 26-pin
Connector on side specification



〔Installation example〕
JAM5PJ-MR-F260E-D4
stn.1 JA10A1-J6-D4
stn.2 JA10A5-J6-D4
stn.3 JA10A6-J6-D4
stn.4 JA10A7-J6-D4
stn.5 JABPP-J6

Unit dimensions

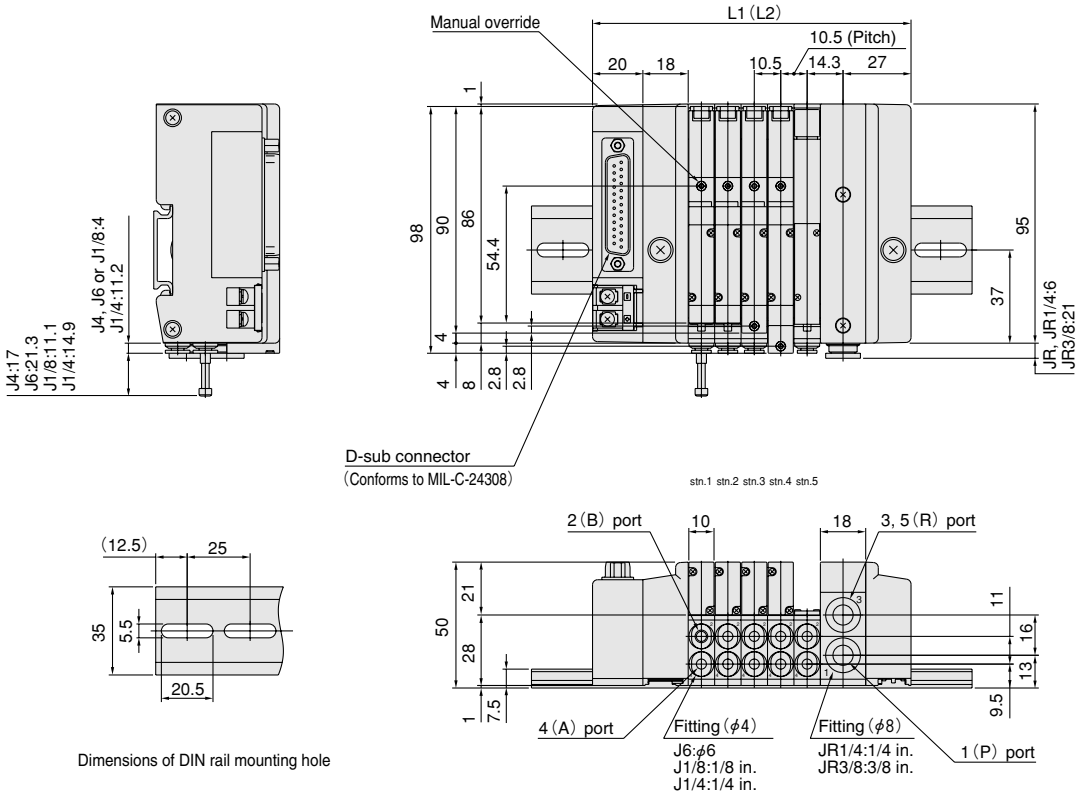
Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0	150	113.0	175
3	105.5	175	123.5	175
4	116.0	175	134.0	200
5	126.5	175	144.5	200
6	137.0	200	155.0	200
7	147.5	200	165.5	225
8	158.0	225	176.0	225
9	168.5	225	186.5	250
10	179.0	225	197.0	250
11	189.5	250	207.5	275
12	200.0	250	218.0	275
13	210.5	275	228.5	275
14	221.0	275	239.0	300
15	231.5	300	249.5	300
16	242.0	300	260.0	325
17	252.5	300	270.5	325
18	263.0	325	281.0	350
19	273.5	325	291.5	350
20	284.0	350	302.0	350

Note : When using two piping blocks.

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JAM□PJ

D-sub connector 25-pin
Connector on upper side specification



Dimensions of DIN rail mounting hole

〔Installation example〕
JAM5PJ-JR-D25□-D4
stn.1 JA10A1-J4-D4
stn.2 JA10A5-J4-D4
stn.3 JA10A6-J4-D4
stn.4 JA10A7-J4-D4
stn.5 JABPP-J4

Unit dimensions

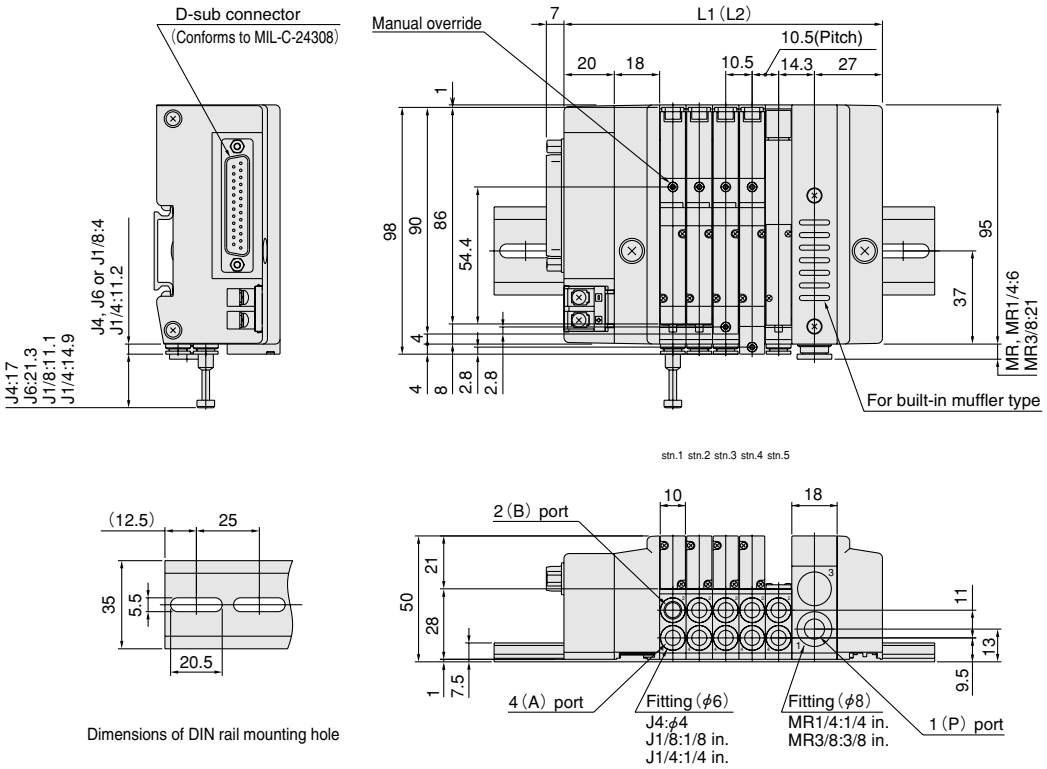
Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0	150	113.0	175
3	105.5	175	123.5	175
4	116.0	175	134.0	200
5	126.5	175	144.5	200
6	137.0	200	155.0	200
7	147.5	200	165.5	225
8	158.0	225	176.0	225
9	168.5	225	186.5	250
10	179.0	225	197.0	250
11	189.5	250	207.5	275
12	200.0	250	218.0	275
13	210.5	275	228.5	275
14	221.0	275	239.0	300
15	231.5	300	249.5	300
16	242.0	300	260.0	325
17	252.5	300	270.5	325
18	263.0	325	281.0	350
19	273.5	325	291.5	350
20	284.0	350	302.0	350

Note : When using two piping blocks.

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JAM□PJ

D-sub connector 25-pin
Connector on side specification



〔Installation example〕
JAM5PJ-MR-D25□E-D4
stn.1 JA10A1-J6-D4
stn.2 JA10A5-J6-D4
stn.3 JA10A6-J6-D4
stn.4 JA10A7-J6-D4
stn.5 JABPP-J6

Unit dimensions

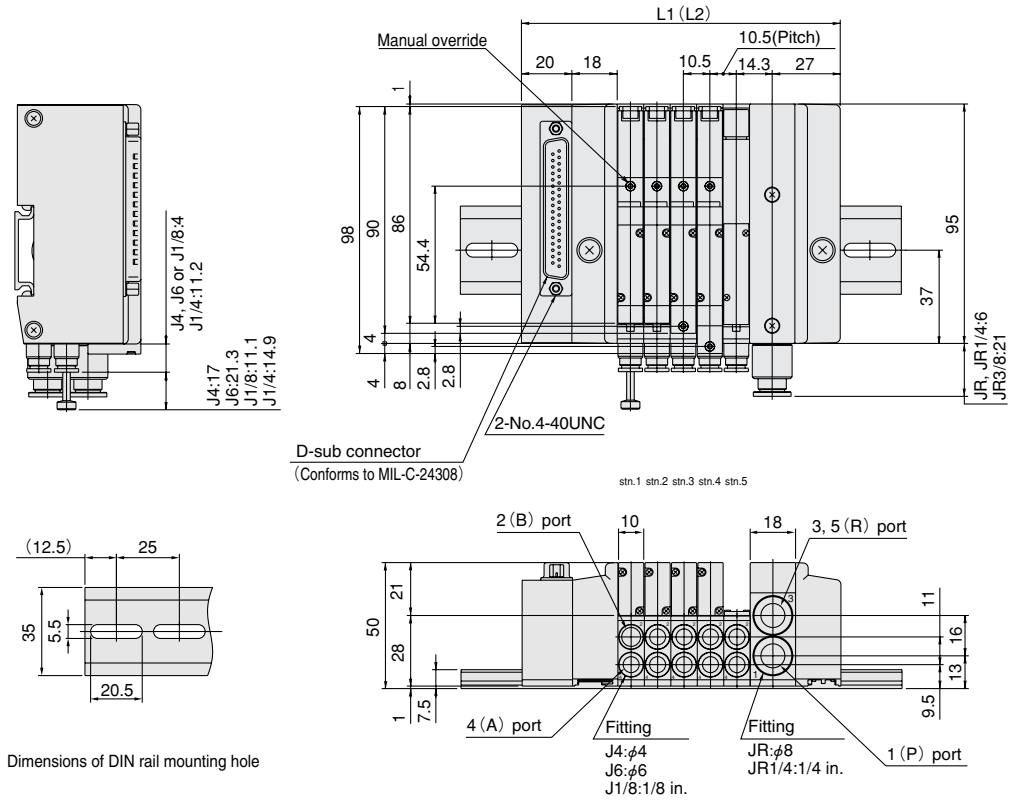
Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0	150	113.0	175
3	105.5	175	123.5	175
4	116.0	175	134.0	200
5	126.5	175	144.5	200
6	137.0	200	155.0	200
7	147.5	200	165.5	225
8	158.0	225	176.0	225
9	168.5	225	186.5	250
10	179.0	225	197.0	250
11	189.5	250	207.5	275
12	200.0	250	218.0	275
13	210.5	275	228.5	275
14	221.0	275	239.0	300
15	231.5	300	249.5	300
16	242.0	300	260.0	325
17	252.5	300	270.5	325
18	263.0	325	281.0	350
19	273.5	325	291.5	350
20	284.0	350	302.0	350

Note : When using two piping blocks.

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JAM□PJ

D-sub connector 37-pin
Connector on upper side specification



Dimensions of DIN rail mounting hole

〔Installation example〕
JAM5PJ-JR3/8-D370U-D4
stn.1 JA10A1-J1/4-D4
stn.2 JA10A5-J1/4-D4
stn.3 JA10A6-J1/4-D4
stn.4 JA10A7-J1/4-D4
stn.5 JABPP-J1/4

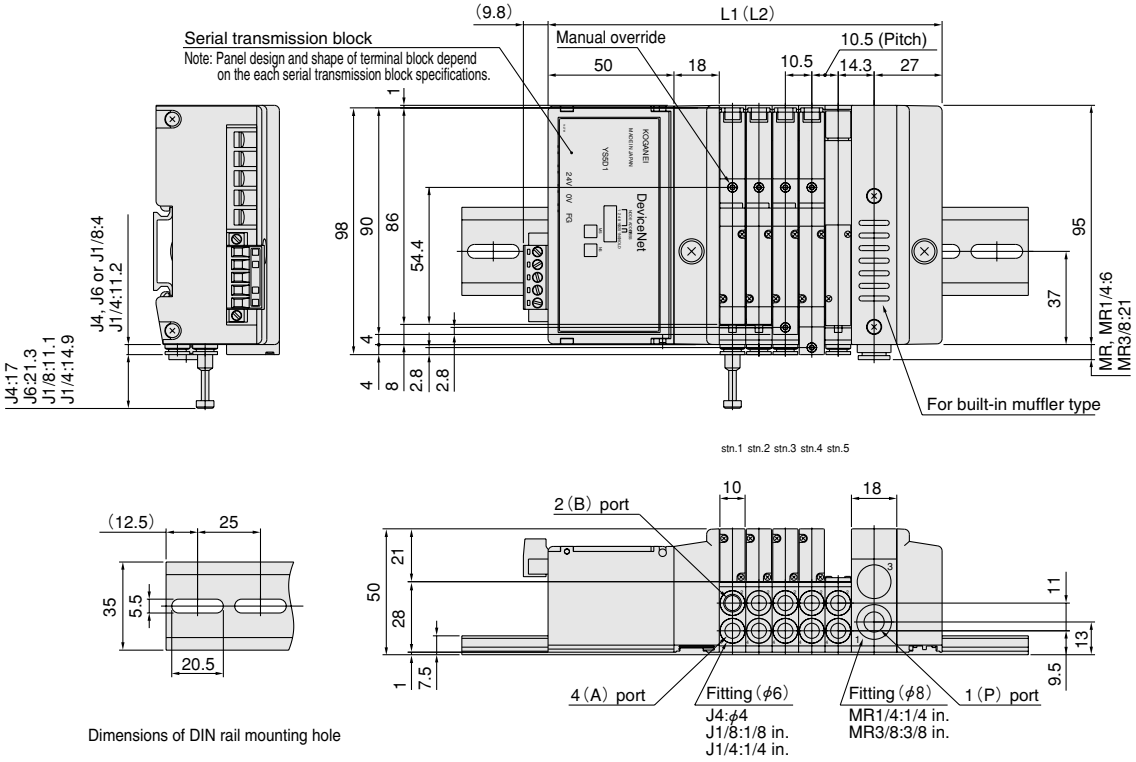
Unit dimensions

Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0	150	113.0	175
3	105.5	175	123.5	175
4	116.0	175	134.0	200
5	126.5	175	144.5	200
6	137.0	200	155.0	200
7	147.5	200	165.5	225
8	158.0	225	176.0	225
9	168.5	225	186.5	250
10	179.0	225	197.0	250
11	189.5	250	207.5	275
12	200.0	250	218.0	275
13	210.5	275	228.5	275
14	221.0	275	239.0	300
15	231.5	300	249.5	300
16	242.0	300	260.0	325
17	252.5	300	270.5	325
18	263.0	325	281.0	350
19	273.5	325	291.5	350
20	284.0	350	302.0	350

Note : When using two piping blocks.

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JAM□SJ



〔Installation example〕

JAM5SJ-MR-D1
stn.1 JA10A1-J6-D4
stn.2 JA10A5-J6-D4
stn.3 JA10A6-J6-D4
stn.4 JA10A7-J6-D4
stn.5 JABPP-J6

Unit dimensions

Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	125.0	175	143.0	200
3	135.5	200	153.5	200
4	146.0	200	164.0	225
5	156.5	225	174.5	225
6	167.0	225	185.0	250
7	177.5	225	195.5	250
8	188.0	250	206.0	275
9	198.5	250	216.5	275
10	209.0	275	227.0	275
11	219.5	275	237.5	300
12	230.0	275	248.0	300
13	240.5	300	258.5	325
14	251.0	300	269.0	325
15	261.5	325	279.5	325
16	272.0	325	290.0	350

Note : When using two piping blocks.

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