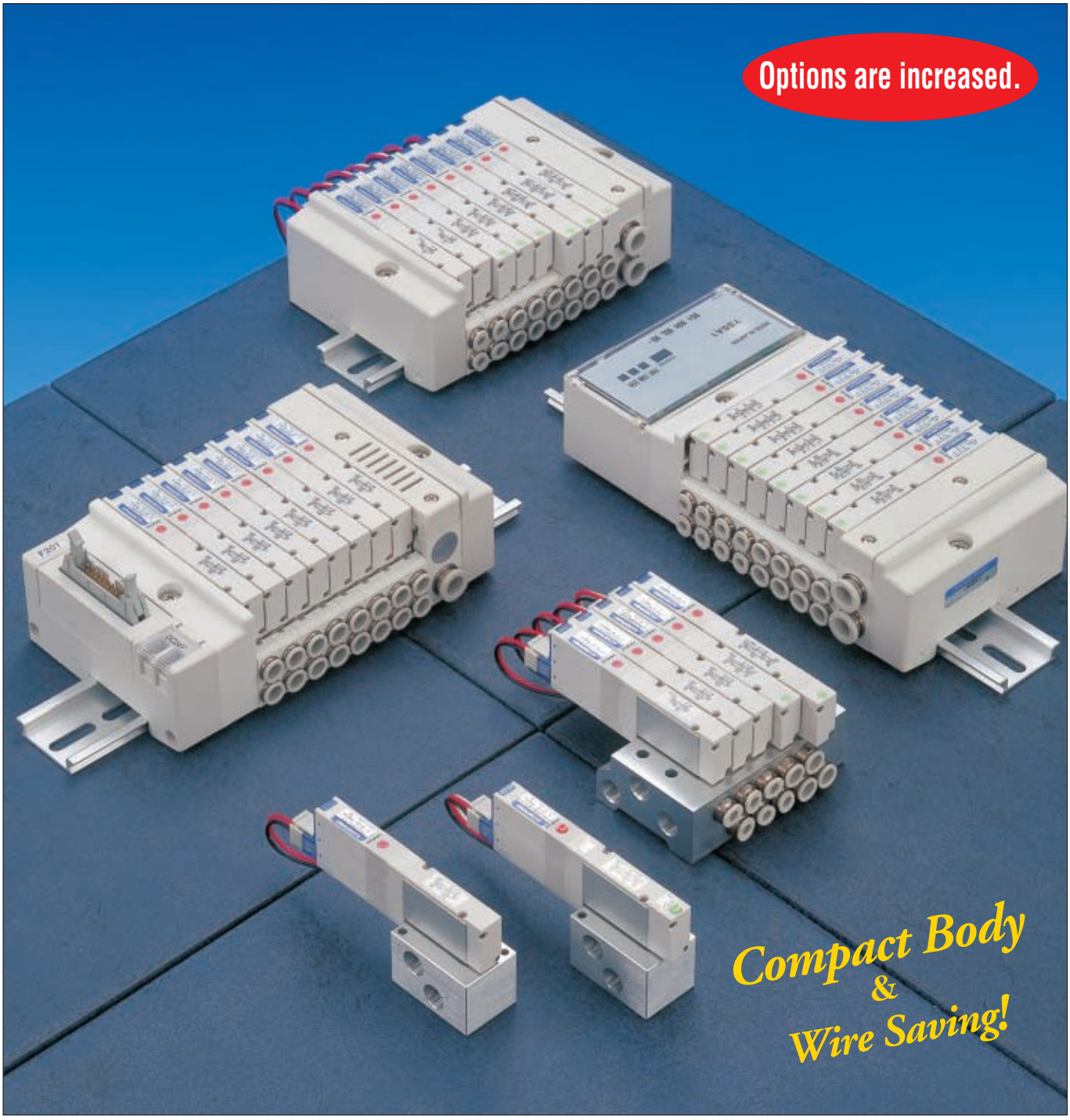
Humphrey®

Catalog No. BKV0008

NEW Products

HJA Series Solenoid Valves



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

New Valve for the New Century **HJA Series Solenoid Valves**

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: Using power saving circuit (Starting current is 21mA.)

Minus common is available

- Plus or minus common is selectable on connector side using the same valve type.

  (Excluding serial transmission type)

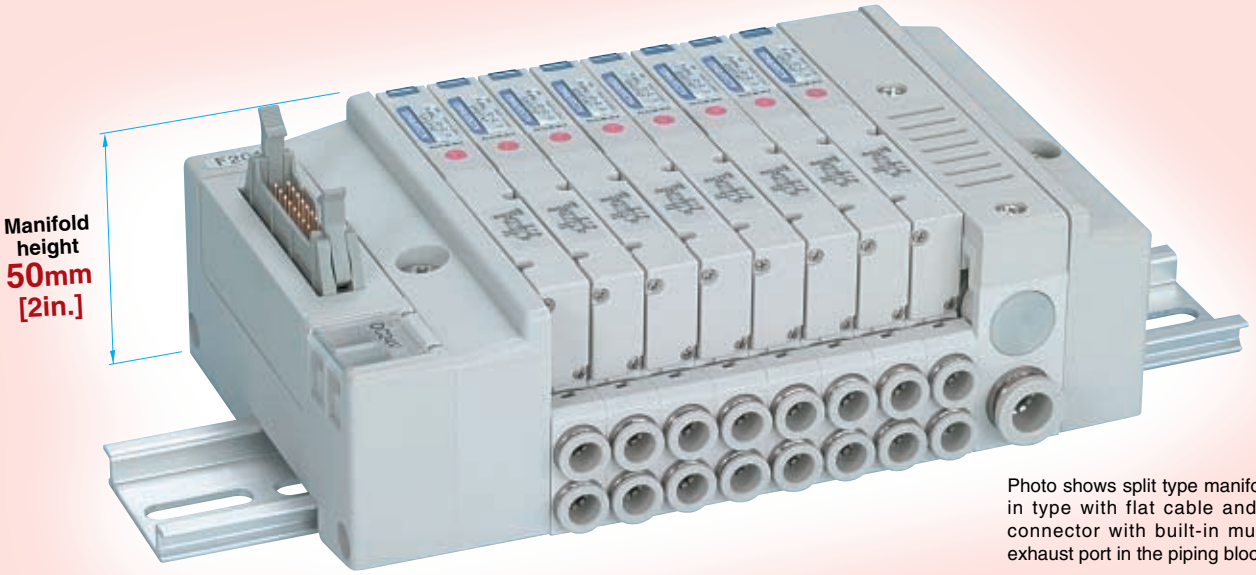


Photo shows split type manifold plug-in type with flat cable and 20-pin connector with built-in muffler on exhaust port in the piping block.

Wide Product Range

Select from a choice of five types for customer's applications.

Sub-base

Monoblock Manifold Type

Split Manifold Non-Plug-in Type

Split Manifold Plug-in Type

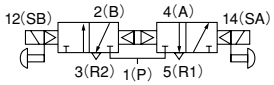
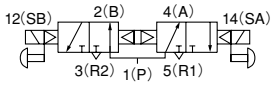
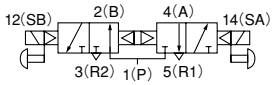
Serial Transmission Type

Consumption" as well as the addition of Tandem valves.

⚠ Caution Always read the "Safety Precautions" on page 3 before use.

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.**
  - **HJA10□AA : Normally closed & Normally closed type**
  - **HJA10□AB : Normally open & Normally open type**
  - **HJA10□AC : Normally closed & Normally open type**
- **The same valve operation is possible as 3-position valve.**
  - **HJA10□AA works as ABR connection valve**
  - **HJA10□AB works as PAB connection valve**

Model	4(A) side	2(B) side	Symbol
HJA10□AA	Normally closed (NC)	Normally closed (NC)	
HJA10□AB	Normally open (NO)	Normally open (NO)	
HJA10□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]

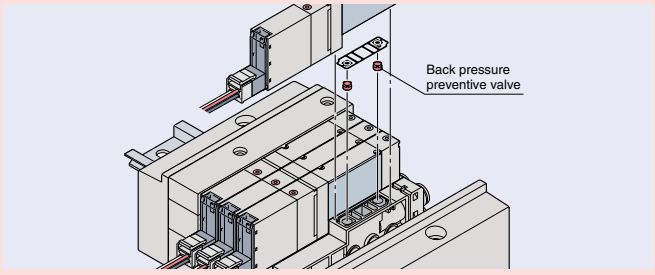

D-sub connector on side surface[Note]


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 preventive valve installed (optional)

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



Individual air supply spacer (optional)

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


Individual air supply spacer (M5)

Supply or exhaust piping block

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


With 5/16 tube quick fitting type
With 1/4 tube quick fitting type
With 3/8 tube quick fitting type


Built-in muffler type

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General precautions

Mounting

1. While any mounting direction can be allowed, avoid directly applying shocks or vibrations on the valves.
2. Avoid using in the locations and environments listed below because they could result in valve breakdowns. If you must use in such conditions, always provide a cover and take other adequate protective measures.
   - Locations where the valve is directly subjected to dripping water or oil, etc.
   - Environments where moisture condenses on the valve body.
   - Locations where the valve is directly subjected to metal chips or dust.
3. Always thoroughly blow off (use compressed air) the piping before connecting it to the valve.

   Entering chips, sealing tape, rust, etc., generated during piping work could result in air leaks or other defective operation.
4. The valve cannot be used with the 4 (A) and 2 (B) ports left open.
5. If mounting the valve inside a control panel, or if energizing it for long periods of time, provide air ventilation or other methods to effectively radiate the heat.

Media

1. Use air for the media. For the use of any other media, consult with Humphrey.
2. Use clean air that does not contain deteriorated compressor oil or other contaminants. Install an air filter (with filtration of 40 μm or less) close to the valve to catch any airline condensate or dust. Moreover, clean the air filter at regular intervals.
3. When the supplied pressure is low, use piping with a sufficiently large diameter for the 1 (P) port tube.

Lubrication

While the system can be used without lubrication, if you must use oil for the actuators, etc., use Turbine Oil Class 1 (ISO VG32) or an equivalent.
Avoid using spindle oil or machine oil. Also be aware that excessive amounts of lubricating oil can result in defective operation.

Atmosphere

The product cannot be used when the media or the ambient atmosphere contains any of the substances listed below.
Organic solvents, phosphoric acid ester-based hydraulic oil, sulfuric acid gas, chlorine gas, or acids, etc.

Wiring

Upon completion of wiring work, always check to confirm that no wiring misconnection exists.

Prevention of erroneous operation in the manifold type

Whenever using the manifold type valve, such as operating air cylinder or performing air blow work, defective operation due to errors caused by the exhaust or to inadequate flow rate could occur. Take the countermeasures listed below before starting use of the manifold type.

1. Erroneous operation due to large exhaust flow rate

Cause: When using large bore cylinders or simultaneous operation of a number of cylinders, the pressure of the collected exhaust can cause the exhaust to flow back through the exhaust ports of other solenoid valves, obstructing the operations of other cylinders, or could cause the air in single-acting cylinders or air hands, etc., to flow backward, causing errors in operation. The cause is insufficient exhaust (large exhaust resistance) in the manifold.

Countermeasure: To reduce the exhaust resistance in the monoblock manifold, open the exhaust ports on both ends. For the split-type manifold, mount piping blocks on both ends, to exhaust from both sides. If there is still an exhaust interference even exhausting on both ends, either split the manifold, or if already a split-type manifold, attach a split to isolate the exhaust or use the back pressure preventive valve.

2. Defective operation due to insufficient pressure or flow rate

Cause: If using a manifold type for operating a large bore cylinder or simultaneous operation of multiple cylinders, or for circuits for blowing air, etc., sudden large consumption of air could result in insufficient flow into the neighboring cylinder, causing a drop in speed or a shortage of cylinder thrust. Moreover, in the pilot type valve, insufficient pressure for the pilot signal can lead to erroneous operation of the stem.

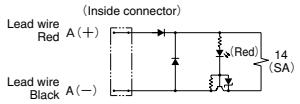
Countermeasure: To prevent air supply shortage to the manifold, supply air from the both ends of the manifold, or from P ports on the piping block mounted on both sides. For air blowing, either separate the air lines and use individually, or consider using an external pilot valve.

Solenoid

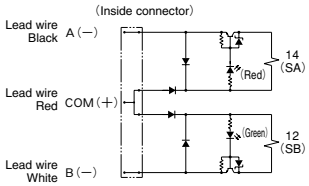
Internal circuit

●Plus common（DC24V, DC12V）

Single solenoid

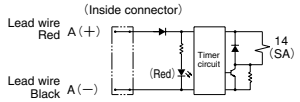


Double solenoid

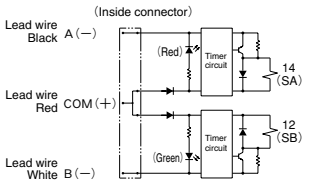


〈Low current type〉（DC24V）

Single solenoid

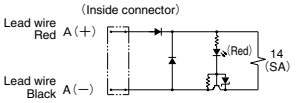


Double solenoid

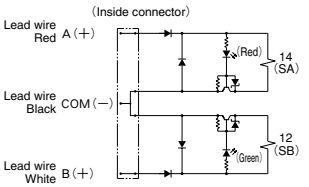


●Minus common（DC24V, DC12V）

Single solenoid

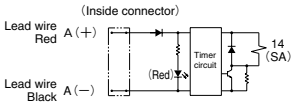


Double solenoid

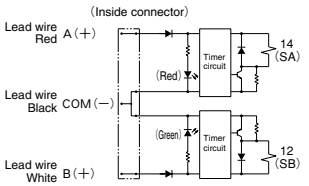


〈Low current type〉（DC24V）

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 at less than the allowable leakage current shown in the solenoid specifications on p. 41. 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)

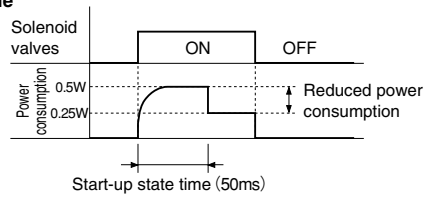
4. The standard housing type is colored blue, while the low current type is light blue.

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 in the 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 start-up power consumption.

●Power cycle

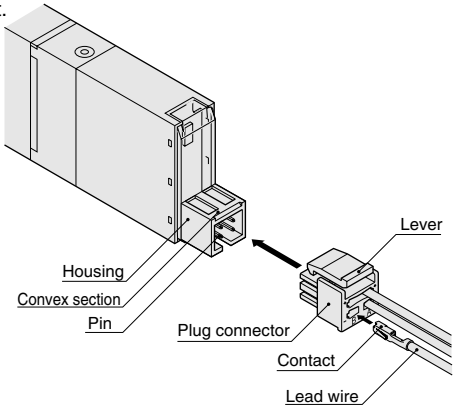


Wiring instructions (When using as a single unit or non-plug-in type manifold)

1. Attaching and removing plug connector

Pick up connector with fingers to insert it into the pin, push in until the lever claw catches the convex section on 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 convex section on the housing, and pull out.



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

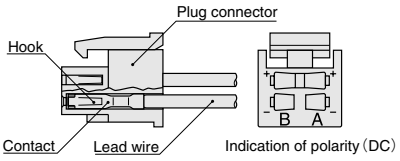
2. Attaching and removing plug connector and contact

●Attaching

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

●Removing

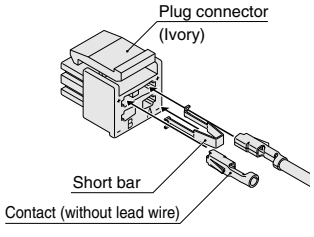
To remove, insert a tool with a fine tip (such as a small screwdriver) into the rectangular hole on the side of the plug connector to push up on the hook of the contact, and then pull out the lead wire. When re-using the contacts, restore the hook back so that they spread outward.



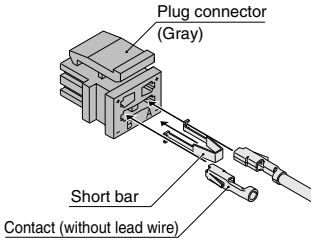
3. Common terminal and short bar

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

●For plus common



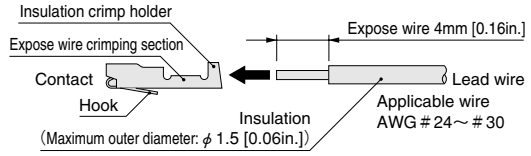
●For minus common



Caution: The plug connectors for plus common and minus common differ in shape.

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 into the contact, and crimp it. Be sure to avoid catching the insulation on the expose wire crimping section.

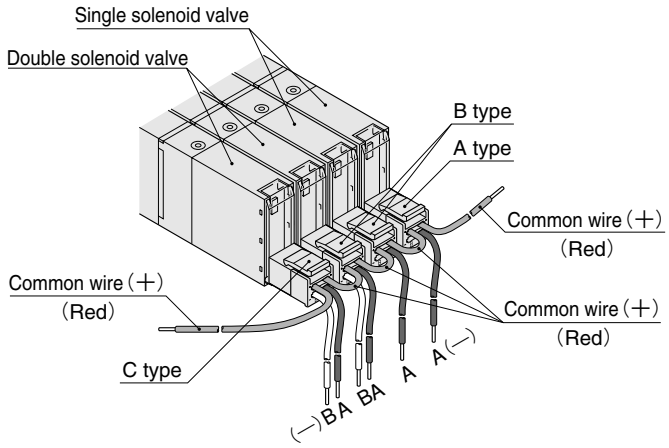


Cautions: **1.** Do not pull the lead wire too hard.
2. Always use the dedicated tool for crimping of connecting lead wire and contact.
Contact: Model 706312-2MK Manufactured by Sumiko Tech, Inc.
Crimping tool: Model F1 (For 706312-2MK) Manufactured by Sumiko Tech, Inc.

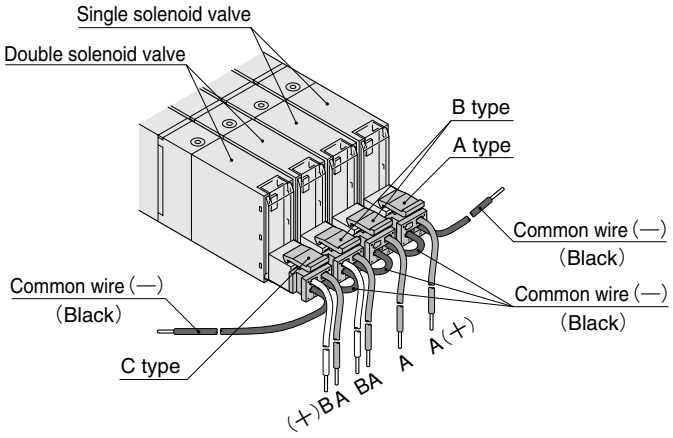
5. Common connector assembly for manifold

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 looking 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 plus common**



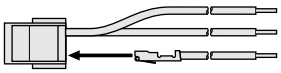
●**For minus common**



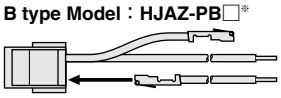
For common connector assembly, order the common connector assemblies listed below.

●**For plus common**

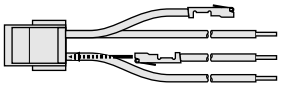
A type Model：HJAZ-PA□※



B type Model：HJAZ-PB□※



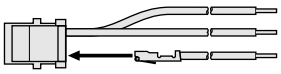
C type Model：HJAZ-PC□※



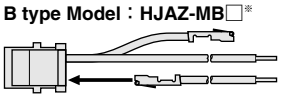
※Lead wire length **Blank** : 300mm[12in.]
3 : 3000mm[118in.]

●**For minus common**

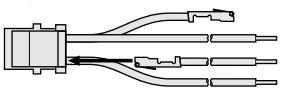
A type Model：HJAZ-MA□※



B type Model：HJAZ-MB□※



C type Model：HJAZ-MC□※

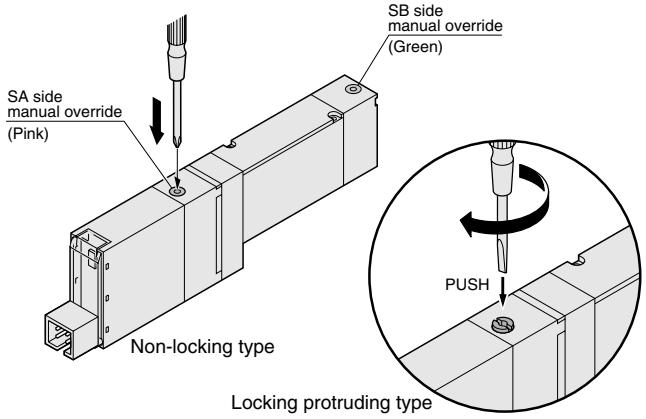


※Lead wire length **Blank** : 300mm[12in.]
3 : 3000mm[118in.]

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 a counterclockwise direction releases a spring on the manual override, returns it to the original position, and releases the lock. If the manual override is never 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.

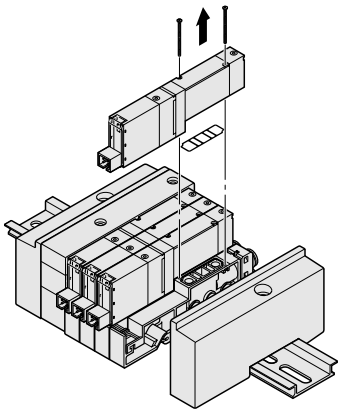


Cautions: **1.** The HJA series are pilot type solenoid valves. As a result, the manual override cannot switch the main valve without supplying air from the 1(P) port.
2. Always release the lock on the locking protruding type manual override before commencing normal operation.
3. Do not attempt to operate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

Manifold

Installing and removing valves

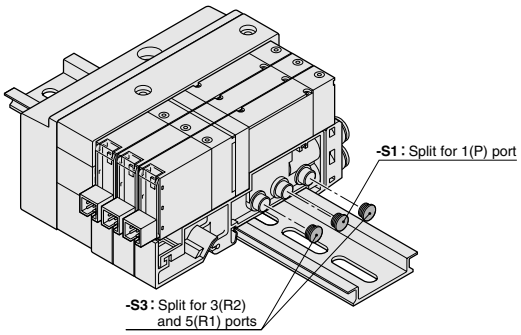
To remove the valve body from the sub-base or manifold, loosen the valve mounting screws (2 places), and pull valve straight out in the direction of the arrow (see diagram at right). For mounting, conduct the same procedure in reverse. The recommended tightening torque for the valve mounting screw is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



Split

In the split manifold, inserting splits to the 1(P), 3(R2), and 5(R1) ports between each of the stations isolate the air path between stations equipped with splits and stations with smaller station numbers. Note, however, that a piping block must be placed on both ends.

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

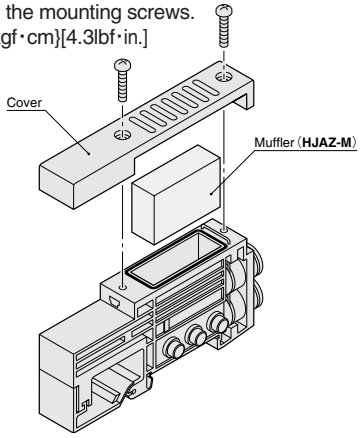


Caution:Mounting splits requires the disassembly and re-assembly of manifolds. See the disassembly diagram, unit adding procedure, and cautions found on p. 8～10.

Replacement of muffler

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

① Remove the mounting screws (2 screws) 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}[4.3lbf·in.]



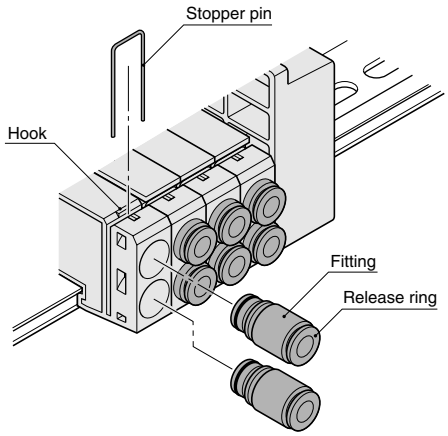
Fitting

Replacement of fitting

Replacement of output port fitting for split manifold

①Loosen the mounting screws of the valve for the fitting to be replaced, and remove the valve.
②Use a minus 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.
③Remove the fitting to be replaced, and push in and attach the new fitting as far as it will go.
④Push in the stopper pin until it hooks onto the valve base.
⑤Mount the valve back into place.

Note: Ensure that the fitting and the stopper pin mounting in place are firmly tightened.
(Fitting single unit model: **HJAZ-J1/8, HJAZ-J5/32, HJAZ-J1/4**)



Tube

1. Attaching and removing tubes

For tube connection, insert an appropriate size tube as far as contacting 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 allowance of out-of-ellipticity (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 reduces significantly.
2. Only use tubes without scratch on the outer surface. If scratch is made 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 air supply. In addition, always confirm that air has been completely exhausted from the manifold.

mm [in.]

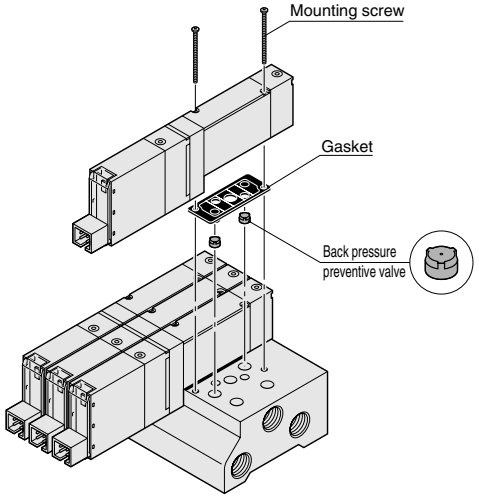
Tube size	Minimum bending radius
1/8 in.	20 [0.8]
5/32 in.	20 [0.8]
5/16 in.	50 [2.0]
1/4 in.	30 [1.2]
3/8 in.	50 [2.0]

Precautions for use of back pressure preventive valve

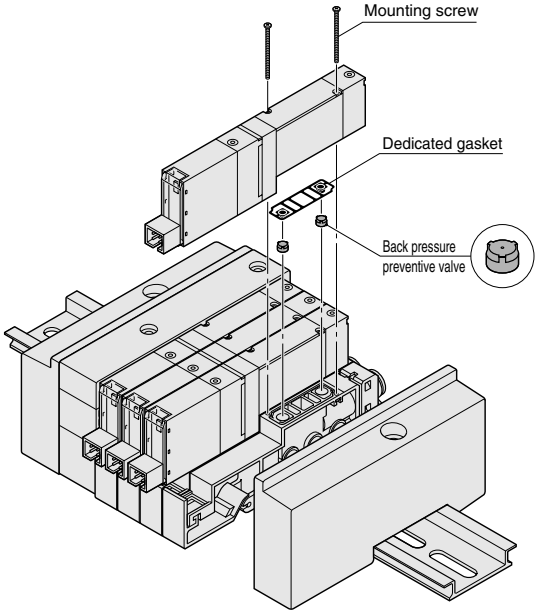
Mounting the back pressure preventive valve on the manifold serves to prevent erroneous cylinder operation due to exhaust flowing from other valves. This is particularly effective when using single acting cylinders or ABR connection valves. Note, however, that the effective OUT-EXH area is reduced to 2.5mm² [Cv:0.14] when using the back pressure preventive valve. In addition, do not let the manifold's exhaust port throttle the exhaust air, since the back pressure preventive valve allows back pressure leaks. If mounting additional back pressure preventive valve to an existing unit, observe the following items.

① Loosen the valve mounting screws holding the back pressure preventive valve, and remove the valve.

② For the monoblock manifold, temporarily remove the gasket from between the valve and manifold, insert the back pressure preventive 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 preventive 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} [1.56lbf·in.]

〔Back pressure preventive valve single unit model: **HJAZ-E1** (for monoblock type), **HJAZ-E2** (for split type)〕

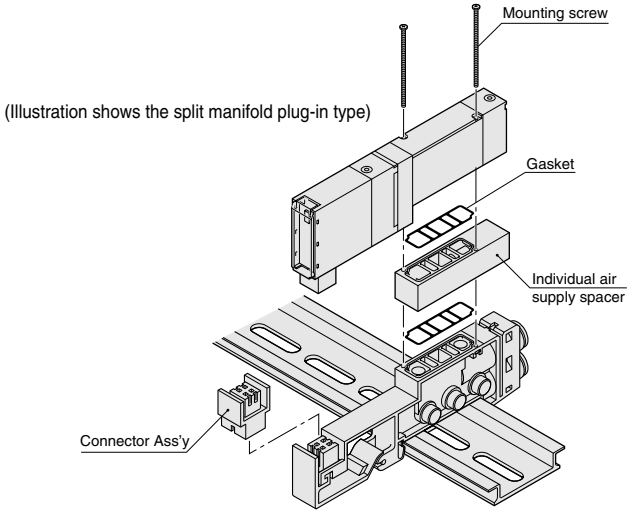
Precautions for use of individual air supply spacer

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

●Mounting method of spacers

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

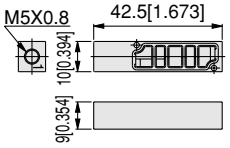
②Install the gaskets provided with the individual air supply spacer, use the mounting screws provided to mount the valve on the manifold. (See below)
For plug-in type, install also the connector Ass'y provided. Tightening torque of the mounting screw: 17.6N·cm {1.8kgf·cm} [1.56lbf·in.]
(Individual air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



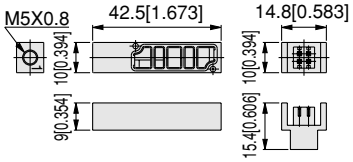
Remark: When attaching fittings to the Individual air supply spacer, use the recommended fittings shown below.
TSH4-M5M, TSH4-M5, TSH6-M5M, TS4-M50, TS4-M5M
Note, however, that only the TSH4-M5M can be attached to HJA10A7, A8, and A9 (3-position valve).

●Dimensions mm [in.]

For non-plug-in type
HJAZ-NPM

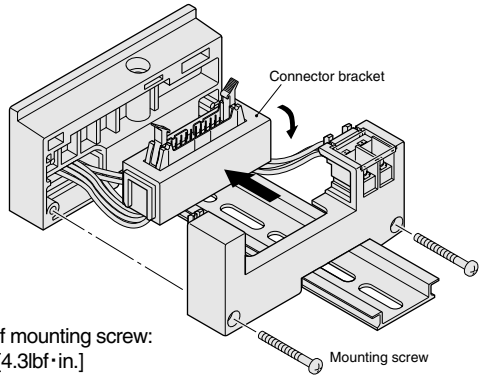


For plug-in type
HJAZ-PPM Connector Ass'y



Changing the direction of the connector bracket

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

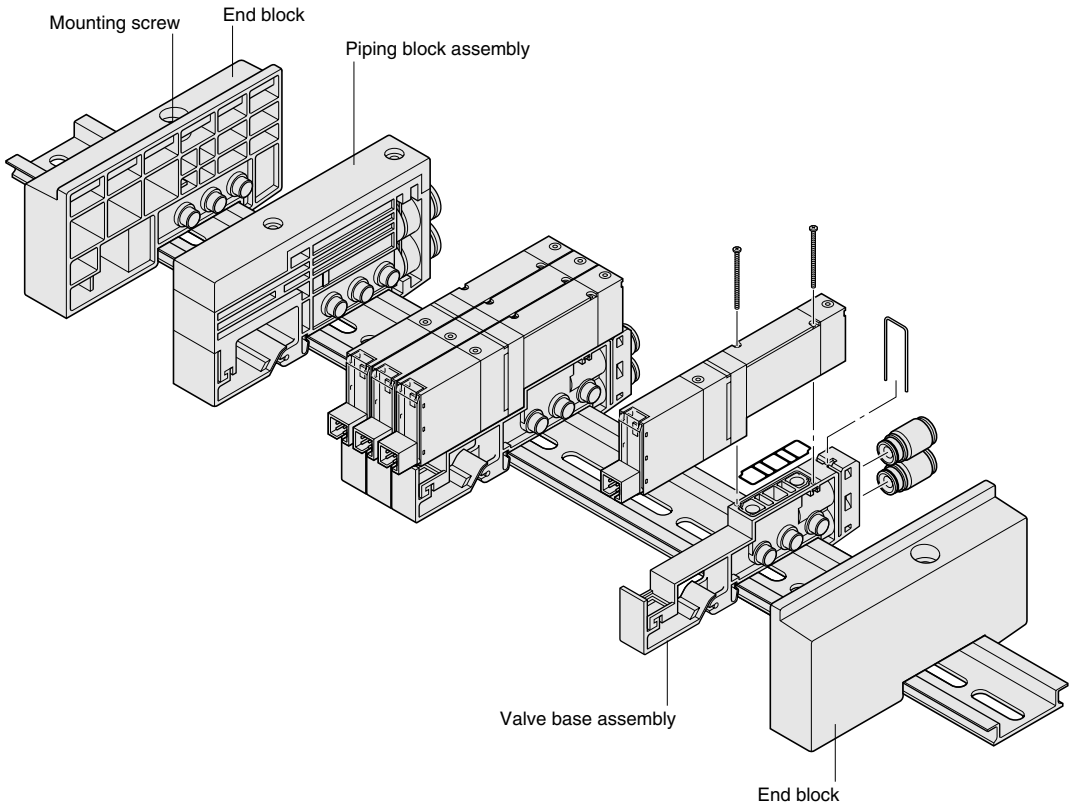


Tightening torque of mounting screw:
49N·cm {5kgf·cm}[4.3lbf·in.]

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

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

Figure 1



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

■Adding valve base unit

Use the valve base assembly for adding units.

①Loosen the mounting screw on the end block until the end block can slide (see Fig.1).
②Disconnect the link between the bases of valve base assembly where the new unit is to be added.
③Mount the valve base assembly to be added on the DIN rail shown in Fig. 2.
④Press 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} [13lbf·in.]

Note: Confirm that the DIN rail mounting bracket hooks securely hold the DIN rail (see Fig. 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.
- Be careful not to be 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 does not securely hold the DIN rail could result in air leaks or separate manifold bases.
- When there are large number of valves simultaneously requiring air to the secondary side, or when there is a large number of valve units, we recommend using two sources of air supply and exhaust (on each side).

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

Figure 2

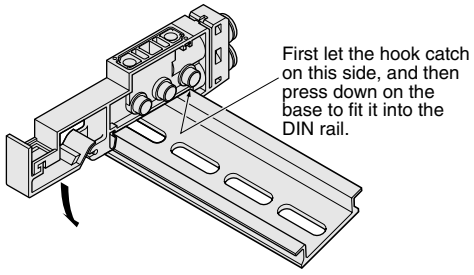
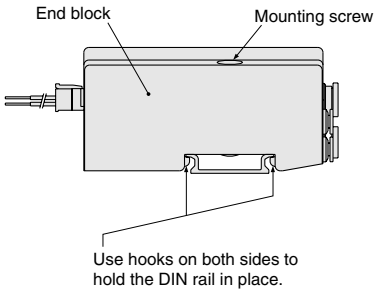
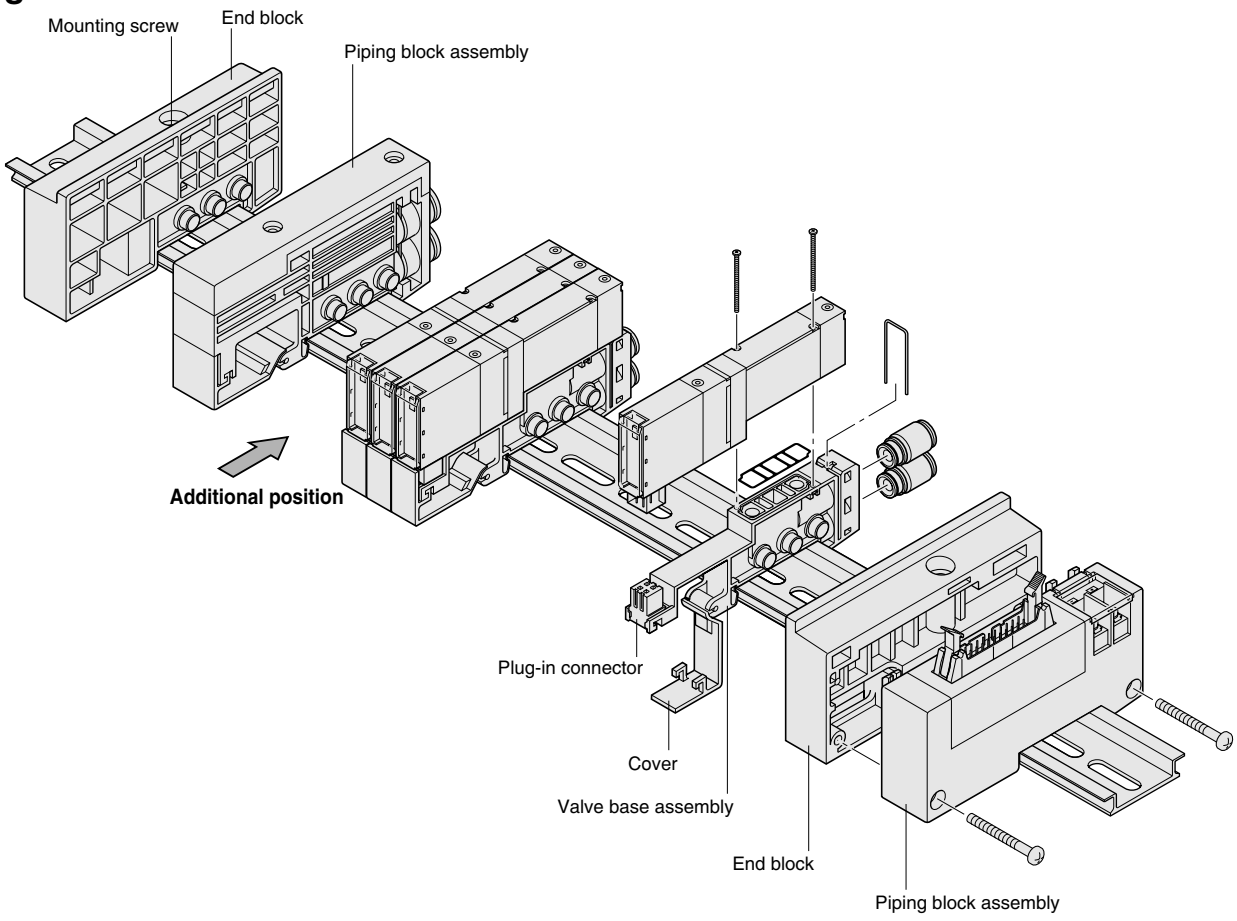


Figure 3



HJA Series Disassembly Diagram of Split Manifold Plug-in Type

Figure 1



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

■Adding valve base unit

Use the valve base assembly for adding units.

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

②Add 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.

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

④Press 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} [13lbf・in.]

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

Figure 2

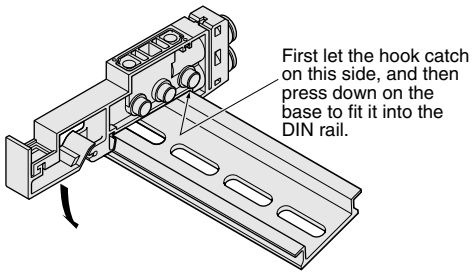
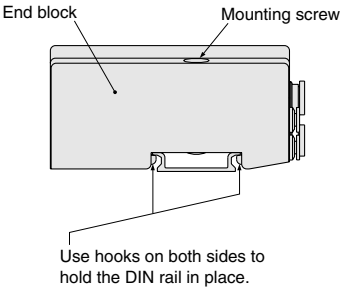


Figure 3



■Wiring Procedure (for plus common)

① Pressing down the upper part of the cover, and open the cover. 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 End terminal lead wire (short, red wire) is inserted into pin insert section of the plug-in connectors removed in step ① (see Fig. 5).
(At time of delivery, end terminal lead wire is inserted into the plug-in connectors of the end unit valve.) Remove this end terminal lead wire, and insert it into the insert section (No. 4) of the plug-in connector for the valve base assembly to be added. Afterward, insert the common wire (red) of this plug-in connector into the insert 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 insert section has been inserted.

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 position 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.11).

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

■Wiring Procedure (for minus common)

① Pressing down the upper part of the cover, and open the cover. 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 End terminal lead wire (short, black wire) is inserted into pin insert section of the plug-in connectors removed in step ① (see Fig. 6).
(At time of delivery, end terminal lead wire is inserted into the plug-in connectors of the end unit valve.) Remove this end terminal lead wire, and insert it into the insert section (No.3) of the plug-in connector for the valve base assembly to be added. Afterward, insert the common wire (black) of this plug-in connector into the insert section (No.3) of the removed plug-in connector.

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

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 position 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. 11).

⑤ Return the connector brackets to their original position, and tighten the wiring block mounting screws in place, then install the cover while watching to ensure 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 an item with a fine tip (such as a small screwdriver) to press lightly on the contact hook from a window 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 lightly on the lead wire to confirm that it is securely inserted.
- Always connect the end terminal lead wire. (see Figs. 5 and 6)
- Be careful not to be trapped or lose gaskets.
- Before supplying air to the manifold, always confirm that the bases are connected, the end block mounting screws are tightened, etc.
  Supplying air when either of the end blocks do not securely hold 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 requiring air to the secondary side, or when there is a large number of valve units, we recommend using two sources of air supply and exhaust (on each side).

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

- When wiring specification is -D370U and adding units is required, please contact us.

Figure 4

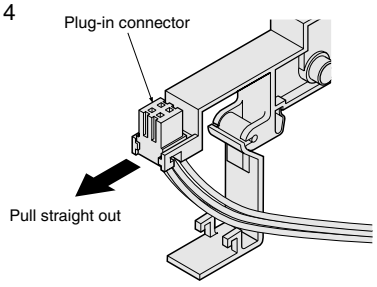
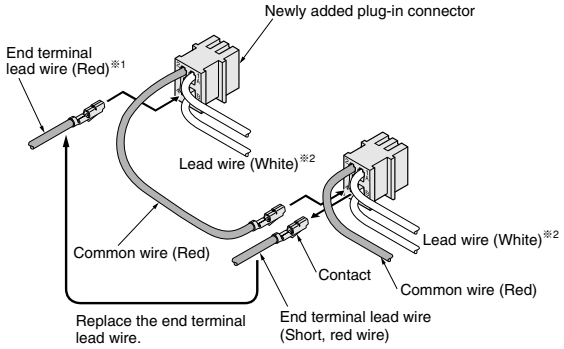
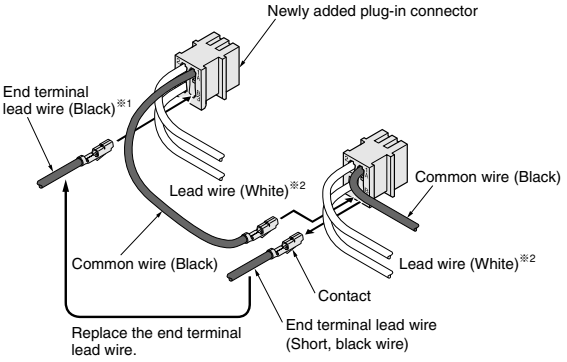


Figure 5 ●For plus common



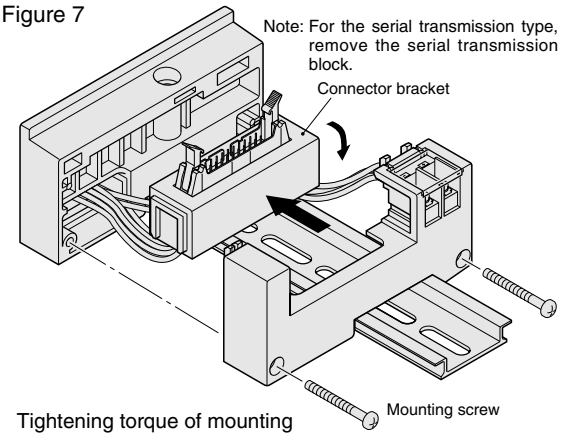
※1: Always insert end terminal lead wire.
※2: Shows when both A and B are used.

Figure 6 ●For minus common



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

Figure 7

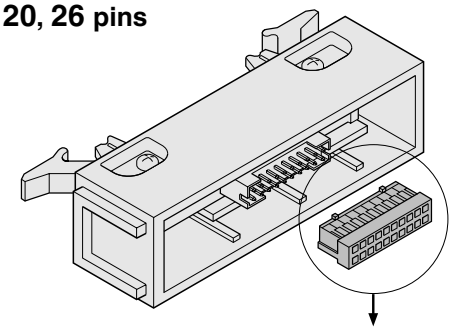


Tightening torque of mounting screw:49N・cm {5kgf・cm} [4.3lbf・in.]

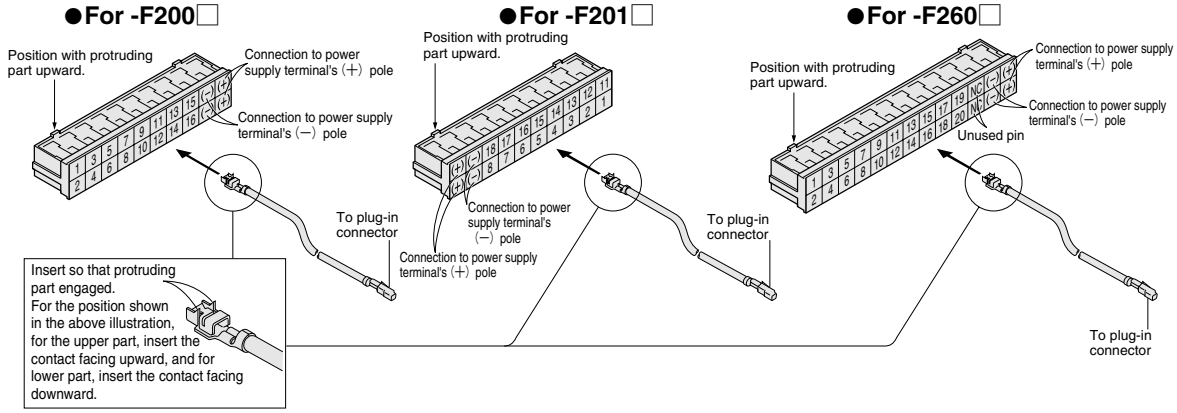
See "Detailed Diagram of Wiring Block Internal Connections" on p.11.

Detailed Diagram of Wiring Block Internal Connections

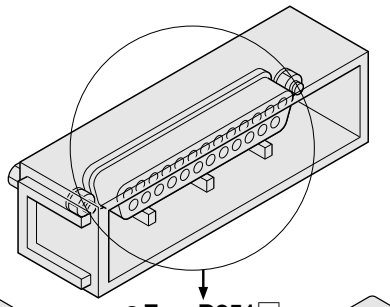
Flat cable connector 20, 26 pins

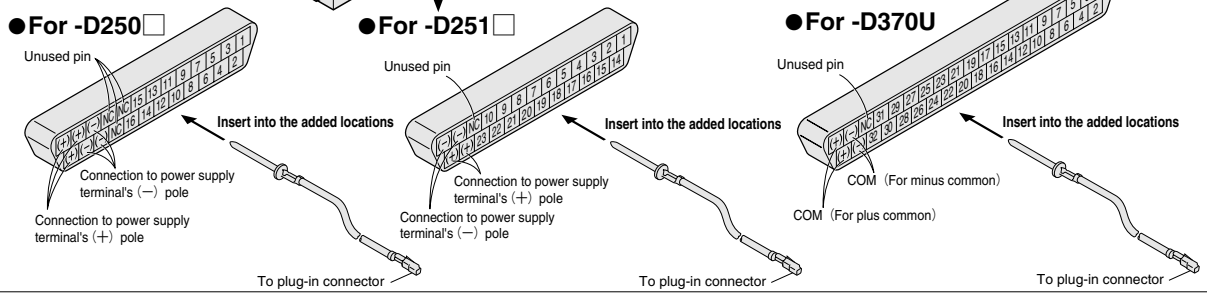


Note: As shown in the left illustration, remove the connector and then perform the wiring.

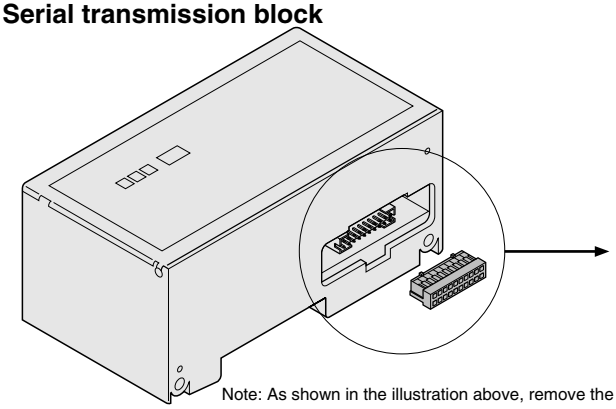


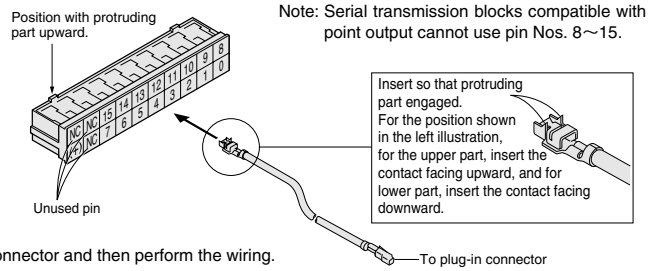
D-sub connector





Serial transmission block





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

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

Serial Transmission Block Specifications

General Specifications

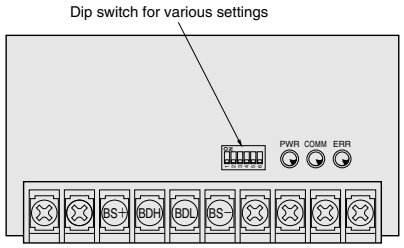
Voltage	DC24V ±10%
Operating temperature range	5～50°C
Vibration resistance	49.0m/s²{5.0G} (Conforms to JIS C 0911)
Shock resistance	98.1m/s²{10.0G} (Conforms to JIS C 0912)

●For details about 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-point output), **-A2** (8-point output)



LED names

Marking	State	Display color	Description
PWR	Lights up	Green	•During power supply
	Shut off		•When 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

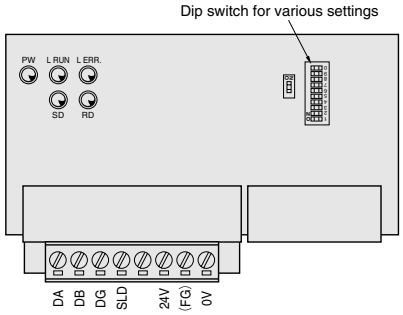
※ For details about CompoBus/S, see the OMRON catalog, user's manual, etc.

● **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 names

Marking	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 for data sending
RD	•Lights up for data receiving
L ERR.	•Lights up for transmission error, and shut off for time over. Lights up for 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.

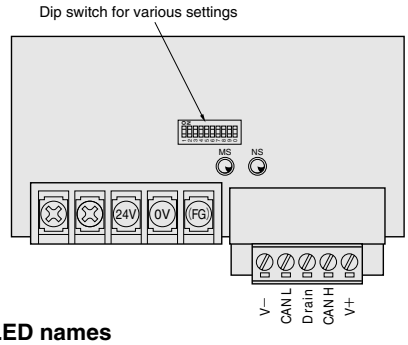
● **Number of outputs per block**
16 solenoids (transmission block specification: **-B1**)

※ 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 names

Marking	State	Display 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 Products Type

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

●**Connectable Manifolds**

・**Humphrey solenoid valves HJA series**

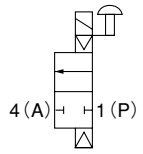
※ Voltage requirements follow DC24V specifications.

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

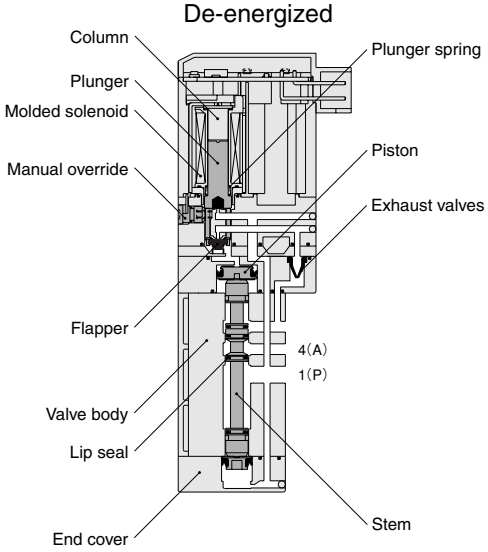
Operating Principle and Symbol

2-port

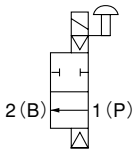
Normally closed (NC)



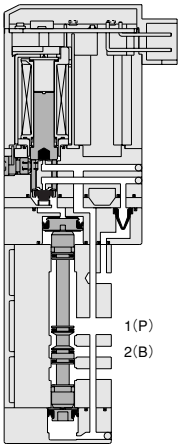
HJA10A1
De-energized



Normally open (NO)



HJA10A2
De-energized

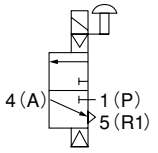


Major Parts and Materials

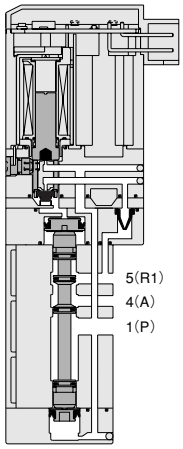
Parts			Materials
Valve	Body		Aluminum alloy (anodized)
	Stem		Aluminum alloy
	Exhaust valve		Synthetic rubber
	Lip seal		
	Flapper		
	Sub-base		Aluminum alloy (anodized)
	Plunger		Magnetic stainless
	Column		
	End cover		Plastic
Manifold	Body	Monoblock	Aluminum alloy (anodized)
		Split type	Plastic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

3-port

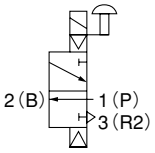
Normally closed (NC)



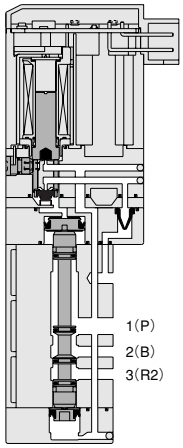
HJA10A3
De-energized



Normally open (NO)

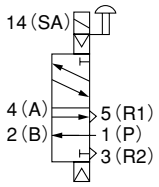


HJA10A4
De-energized

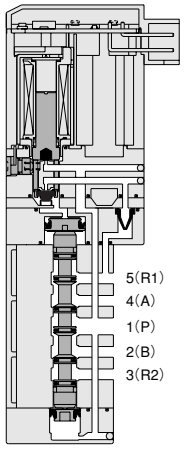


5-port, 2-position

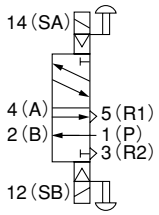
Single solenoid



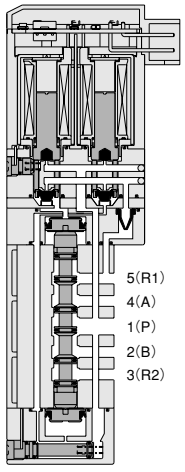
HJA10A5
De-energized



Double solenoid



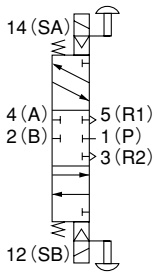
HJA10A6
De-energized condition after energizing solenoid 12(SB)



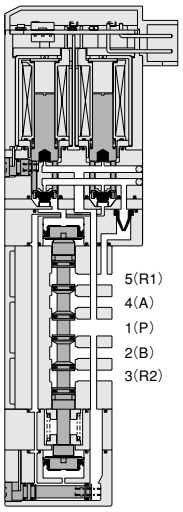
5-port, 3-position

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

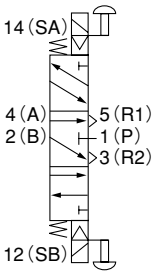
All port block



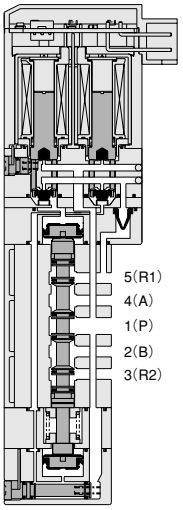
HJA10A7



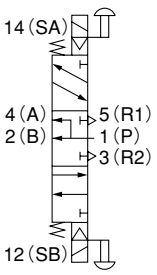
ABR connection



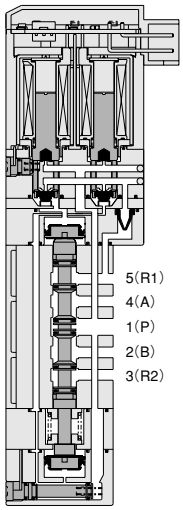
HJA10A8



PAB connection



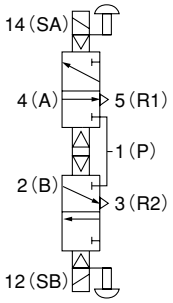
HJA10A9



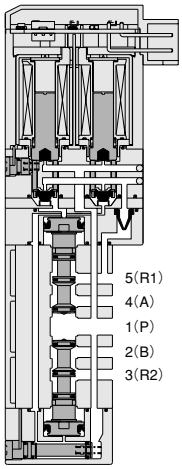
Tandem 3-port, 4-position

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

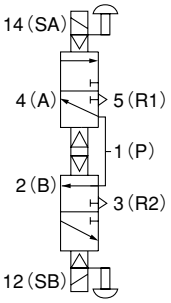
Normally closed (NC), Normally closed (NC)



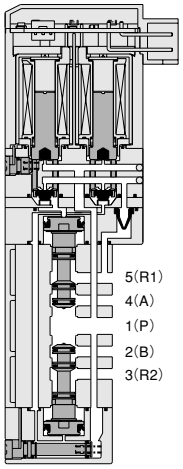
HJA10AA



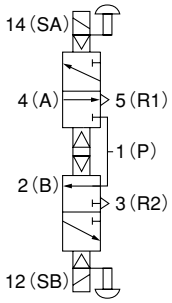
Normally open (NO), Normally open (NO)



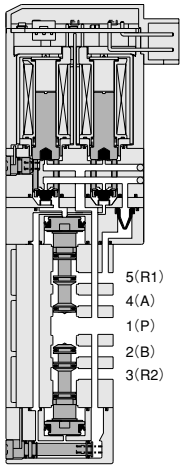
HJA10AB



Normally closed (NC), Normally open (NO)



HJA10AC



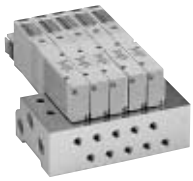
HJA Series Order Code

The solenoid valves HJA series order code is classified into the following 5 categories.
For details on order codes, see the designated pages.

HJA10A□ : **Single valve unit**

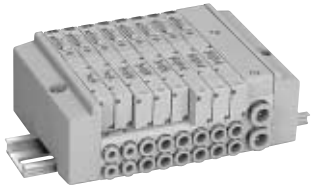
p. 17

HJAM□A : **Monoblock manifold**



p. 19

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



p. 21

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

p. 25

HJAM□SJ : **Serial transmission type**

p. 29

Single Valve Unit Order Code

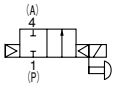
■Model

HJA10
Standard type

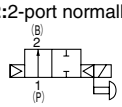
HJA10L
Low current type

■Valve specification

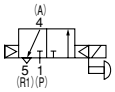
A1:2-port normally closed



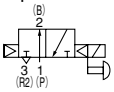
A2:2-port normally open



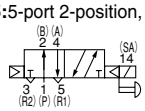
A3:3-port normally closed



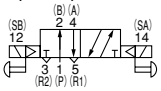
A4:3-port normally open



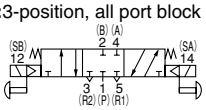
A5:5-port 2-position, single



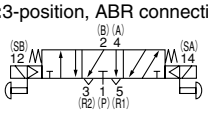
A6:5-port 2-position, double



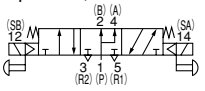
A7:3-position, all port block



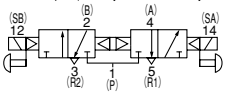
A8:3-position, ABR connection



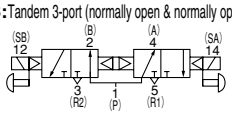
A9:3-position, PAB connection



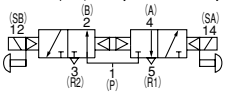
AA: Tandem 3-port (normally closed & normally closed)



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



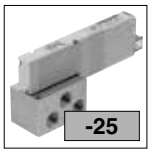
AC: Tandem 3-port (normally closed & normally open)



■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

Plus common
S type plug connector
Lead wire 300mm[12in.]

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

Minus common
S type plug connector
Lead wire 300mm[12in.]

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

■Voltage

-D4
24VDC

-D5[Note3]
12VDC

Model	Valve specification	Sub-base	Manual override	Wiring specification	Voltage
HJA10 **HJA10L**	**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. If using with a sub-base, the "**Blank** (plug-in)" cannot be selected as wiring specifications. Select from among **-PN**, **-PS**, **-PS3**, **-MS** or **-MS3**.
3. **-D5**(12VDC) is not available in the low current type.

Additional Parts Order Code for Single Valve Unit

Parts for single valve unit

HJAZ - ☐

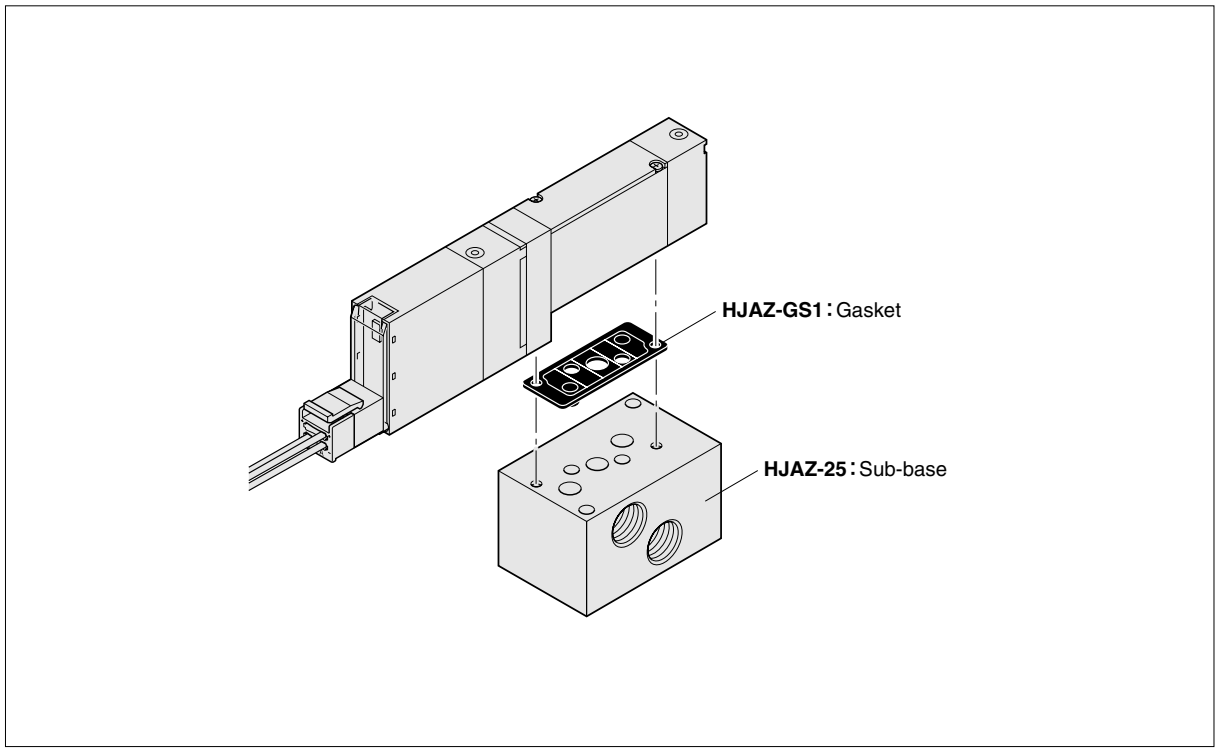
Parts content
25 : Sub-base (sub-base and gasket)[Note1]
GS1 : Gasket[Note2]

Notes: 1. Valve mounting screws are not included.
2. Be aware that this gasket is different from the **GS2** gasket for the split manifolds.

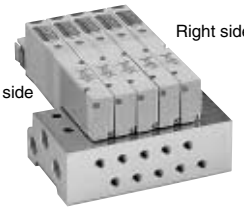
Connector-related

HJAZ - ☐

Connector specification
CP : Plus common plug connector, lead wire length 300mm[12in.]
CP3 : Plus common plug connector, lead wire length 3000mm[118in.]
CPN : Plus common plug connector, without lead wire (short bar and contacts included)
CM : Minus common plug connector, lead wire length 300mm[12in.]
CM3 : Minus common plug connector, lead wire length 3000mm[118in.]
CMN : Minus common plug connector, without lead wire (short bar and contacts included)



Monoblock Manifold Order Code



■**Model**

HJA10
Standard type

HJA10L
Low current type

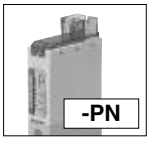
■**Manual override**

Non-locking type

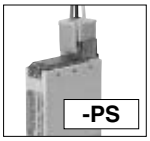
Locking protruding type

■**Wiring specification**

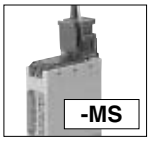
S type plug connector
Without connector and leads



Plus common
S type plug connector
Lead wire 300mm[12in.]



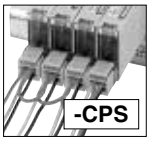
Minus common
S type plug connector
Lead wire 300mm[12in.]



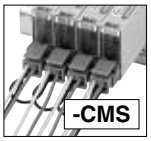
Plus common
S type plug connector
Lead wire 3000mm[118in.]

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

Plus common pre-wired connection
S type plug connector
Lead wire 300mm[12in.]



Minus common pre-wired connection
S type plug connector
Lead wire 300mm[12in.]



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

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

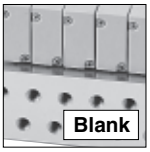
■**Back pressure preventive valve**

Blank
Without back pressure preventive valve

-E1
With back pressure preventive valve

■**Individual air supply spacer**

Without spacer



With individual air supply spacer

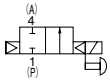
■**Voltage**

-D4
24VDC

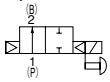
-D5 Note2
12VDC

■**Valve specification**

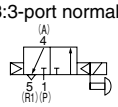
A1:2-port normally closed



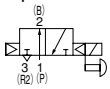
A2:2-port normally open



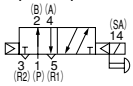
A3:3-port normally closed



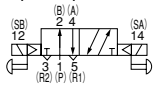
A4:3-port normally open



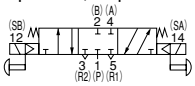
A5:5-port 2-position, single



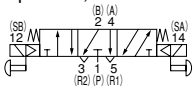
A6:5-port 2-position, double



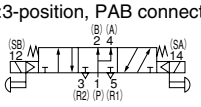
A7:3-position, all port block



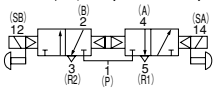
A8:3-position, ABR connection



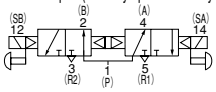
A9:3-position, PAB connection



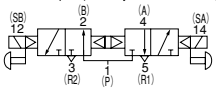
AA:Tandem 3-port (normally closed & normally closed)



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



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



Model	Number of units	Station	Model	Valve specification	Manual override	Wiring specification	Back pressure preventive valve	Individual air supply spacer	Voltage
Manifold code		Mounting valve code							
HJAM	2 ⋮ 20	stn. 1 ⋮ stn.□ Note1	HJA10 HJA10L	A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC	Blank -83	-PN -PS -PS3 -CPS -CPS3 -MS -MS3 -CMS -CMS3	Blank -E1	Blank -NPM	-D4 -D5 Note2
			HJABP (for block-off plate)						

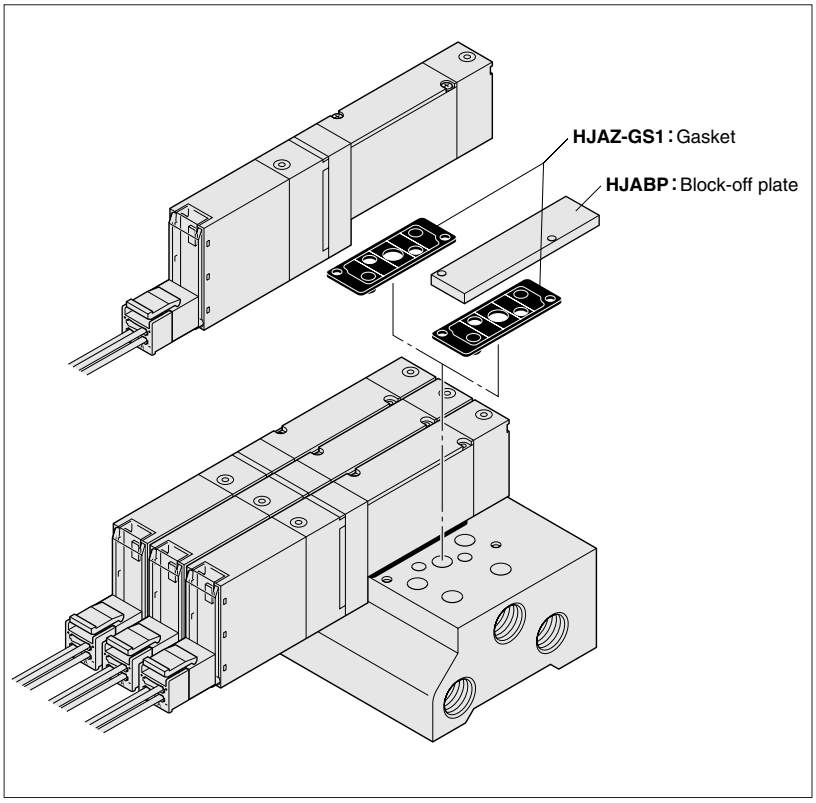
Notes: 1. Valve mounting location is from the left, with solenoid on top, and 4(A) and 2(B) ports in front.
2. **-D5**(12VDC) is not available in the low current type.

Additional Parts Order Code for Monoblock Manifold

Manifold parts

HJAZ - ☐

Parts description
GS1 : Gasket
E1 : Back pressure preventive valve (2 pcs. for monoblock type)
NPM: Individual air supply spacer
(Spacer body, gasket and 2 mounting screws)



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

HJABP

Connector-related

HJAZ - ☐

Connector specification
CP : Plus common plug connector, lead wire length 300mm[12in.]
CP3 : Plus common plug connector, lead wire length 3000mm[118in.]
CPN : Plus common plug connector, without lead wire (short bar and contacts included)
PA : Plus common A type, plug connector lead wire length 300mm※[12in.]
PA3 : Plus common A type, plug connector lead wire length 3000mm※[118in.]
PB : Plus common B type, plug connector lead wire length 300mm※[12in.]
PB3 : Plus common B type, plug connector lead wire length 3000mm※[118in.]
PC : Plus common C type, plug connector lead wire length 300mm※[12in.]
PC3 : Plus common C type, plug connector lead wire length 3000mm※[118in.]
CM : Minus common plug connector, lead wire length 300mm[12in.]
CM3 : Minus common plug connector, lead wire length 3000mm[118in.]
CMN: Minus common plug connector, without lead wire (short bar and contacts included)
MA : Minus common A type, plug connector lead wire length 300mm※[12in.]
MA3 : Minus common A type, plug connector lead wire length 3000mm※[118in.]
MB : Minus common B type, plug connector lead wire length 300mm※[12in.]
MB3 : Minus common B type, plug connector lead wire length 3000mm※[118in.]
MC : Minus common C type, plug connector lead wire length 300mm※[12in.]
MC3 : Minus common C type, plug connector lead wire length 3000mm※[118in.]

※For details, see p.5.

Manifold Order Code Example (6 units of HJA series)

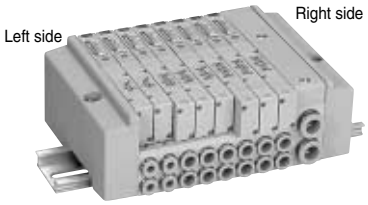
HJAM6A

stn.1～2 HJA10A5-PS-D4
stn.3～5 HJA10A6-PS-D4
stn.6 HJABP
Note: This order code example has no relation to the illustration above.

Precautions for Order Code

● **Order for valves only**
Place orders by **"Single Valve Unit Order Code"** on p. 17.
For common terminal wiring connections, order separately the common connector assemblies listed above.

Split Manifold Non-Plug-in Type Order Code



■**Piping block specification (air supply and exhaust)**

-JR :1(P) and 3･5(R) ports 5/16 tube fitting right-side mounting
-JL :1(P) and 3･5(R) ports 5/16 tube fitting left-side mounting
-JD :1(P) and 3･5(R) ports 5/16 tube fitting both-side mounting
-JR1/4 :1(P) and 3･5(R) ports 1/4 tube fitting right-side mounting
-JL1/4 :1(P) and 3･5(R) ports 1/4 tube fitting left-side mounting
-JD1/4 :1(P) and 3･5(R) ports 1/4 tube fitting both-side mounting
-JR3/8 :1(P) and 3･5(R) ports 3/8 tube fitting right-side mounting
-JL3/8 :1(P) and 3･5(R) ports 3/8 tube fitting left-side mounting
-JD3/8 :1(P) and 3･5(R) ports 3/8 tube fitting both-side mounting

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

-MR :1(P) port 5/16 tube fitting, 3･5(R) ports built-in muffler right-side mounting
-ML :1(P) port 5/16 tube fitting, 3･5(R) ports built-in muffler left-side mounting
-MD :1(P) port 5/16 tube fitting, 3･5(R) ports built-in muffler both-side mounting
-MR1/4 :1(P) port 1/4 tube fitting, 3･5(R) ports built-in muffler right-side mounting
-ML1/4 :1(P) port 1/4 tube fitting, 3･5(R) ports built-in muffler left-side mounting
-MD1/4 :1(P) port 1/4 tube fitting, 3･5(R) ports built-in muffler both-side mounting
-MR3/8 :1(P) port 3/8 tube fitting, 3･5(R) ports built-in muffler right-side mounting
-ML3/8 :1(P) port 3/8 tube fitting, 3･5(R) ports built-in muffler left-side mounting
-MD3/8 :1(P) port 3/8 tube fitting, 3･5(R) ports built-in muffler both-side mounting

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

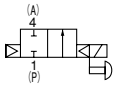
■**Model**

HJA10
Standard type

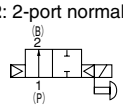
HJA10L
Low current type

■**Valve specification**

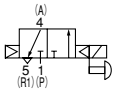
A1: 2-port normally closed



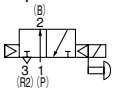
A2: 2-port normally open



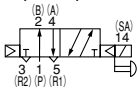
A3: 3-port normally closed



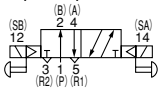
A4: 3-port normally open



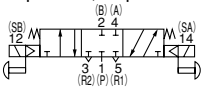
A5: 5-port 2-position, single



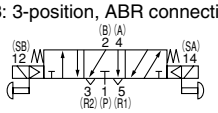
A6: 5-port 2-position, double



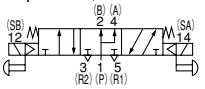
A7: 3-position, all port block



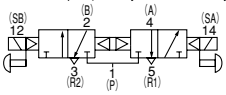
A8: 3-position, ABR connection



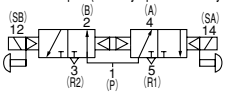
A9: 3-position, PAB connection



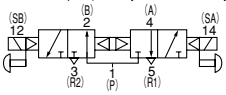
AA: Tandem 3-port (normally closed & normally closed)



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 code		
HJAM	**2** **⋮** **20**	**NJ**

Piping block specification (air supply and exhaust)	
-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**

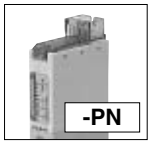
■Manual override

Non-locking type

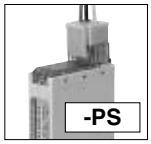
Locking protruding type

■Wiring specification

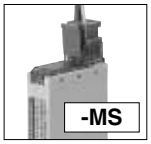
S type plug connector
Without connector and leads



Plus common
S type plug connector
Lead wire 300mm[12in.]



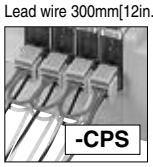
Minus common
S type plug connector
Lead wire 300mm[12in.]



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

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

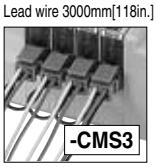
Plus common
pre-wired connection
S type plug connector
Lead wire 300mm[12in.]



Minus common
pre-wired connection
S type plug connector
Lead wire 300mm[12in.]

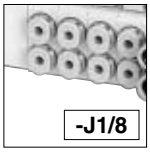
Plus common
pre-wired connection
S type plug connector
Lead wire 3000mm[118in.]

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

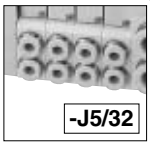


■Manifold fitting specification

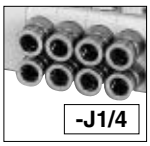
With 1/8 tube fitting



With 5/32 tube fitting



With 1/4 tube fitting



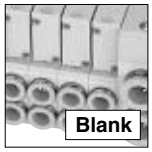
■Back pressure preventive valve

Blank
Without back pressure preventive valve

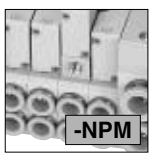
-E2
With back pressure preventive valve

■Individual air supply spacer

Without spacer



With individual air supply spacer



■Split

Blank : Without split
-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
24VDC

-D5 Note3
12VDC

Station	Model	Valve specification	Manual override	Wiring specification	Manifold fitting specification	Back pressure preventive valve	Individual air supply spacer	Split	Voltage
Mounting valve code									
stn. 1 ⋮ **stn.□** Note1	**HJA10** **HJA10L**	**A1** **A2** **A3** **A4** **A5** **A6** **A7** **A8** **A9** **AA** **AB** **AC**	**Blank** **-83**	**-PN** **-PS** **-PS3** **-CPS** **-CPS3** **-MS** **-MS3** **-CMS** **-CMS3**	**-J1/8** **-J5/32** **-J1/4**	**Blank** **-E2**	**Blank** **-NPM**	**Blank** **-S1** Note2 **-S3** Note2 **-SA** Note2	**-D4** **-D5** Note3
	HJABP (for block-off plate)								

Notes: 1. Valve mounting location is from the left, with solenoid on top, and 4(A) and 2(B) ports in front.
2. Splits can be installed only when piping blocks are mounted on both sides. In addition, only 1 location of each split can be mounted in one manifold for **-SA**, or one each split for **-S1** and **-S3** for a total of two locations. When in delivery, the designated splits are mounted between the designated station and the station to its immediate left (the next smaller stn. No.).
3. **-D5**(12VDC) is not available in the low current type.

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

Manifold parts

HJAZ - □

Parts description

GS2 : Gasket (for split type)
E2 : Back pressure preventive valve (2 pcs. for split type and 1 pce. gasket)
J1/8 : 2 pcs. 1/8 tube fittings, and 1 pce. stopper pin
J5/32 : 2 pcs. 5/32 tube fittings, and 1 pce. stopper pin
J5/16 : 2 pcs. 5/16 tube fittings, and 1 pce. stopper pin
J1/4 : 2 pcs. 1/4 tube fittings, and 1 pce. stopper pin
J1/4P : 2 pcs. 1/4 tube fittings for 1(P) and 3・5(R) ports, and 1 pce. stopper pin
J3/8 : 2 pcs. 3/8 tube fittings, and 1 pce. stopper pin
M : Muffler for piping block
NPM : Individual air supply spacer (spacer body, gasket and 2 mounting screws)
S1 : Split for 1(P) port
S3 : Split for 3(R2) and 5(R1) ports
SA : Split for 1(P) port, 3(R2) and 5(R1) ports

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

HJABP

Piping block assembly

HJAZ - □

Piping specification

PJ : 1(P) and 3・5(R) ports 5/16 tube fitting
PJ1/4 : 1(P) and 3・5(R) ports 1/4 tube fitting
PJ3/8 : 1(P) and 3・5(R) ports 3/8 tube fitting
PM : 1(P) port 5/16 tube fitting, 3・5(R) port built-in muffler
PM1/4 : 1(P) port 1/4 tube fitting, 3・5(R) port built-in muffler
PM3/8 : 1(P) port 3/8 tube fitting, 3・5(R) port built-in muffler

End blocks (one set of left and right)

HJAZ - E

Connector-related

HJAZ - □

Connector specification

CP : Plus common plug connector, lead wire length 300mm[12in.]
CP3 : Plus common plug connector, lead wire length 3000mm[118in.]
CPN : Plus common plug connector, without lead wire (short bar and contacts included)
PA : Plus common A type, plug connector lead wire length 300mm※[12in.]
PA3 : Plus common A type, plug connector lead wire length 3000mm※[118in.]
PB : Plus common B type, plug connector lead wire length 300mm※[12in.]
PB3 : Plus common B type, plug connector lead wire length 3000mm※[118in.]
PC : Plus common C type, plug connector lead wire length 300mm※[12in.]
PC3 : Plus common C type, plug connector lead wire length 3000mm※[118in.]
CM : Minus common plug connector, lead wire length 300mm[12in.]
CM3 : Minus common plug connector, lead wire length 3000mm[118in.]
CMN : Minus common plug connector, without lead wire (short bar and contacts included)
MA : Minus common A type, plug connector lead wire length 300mm※[12in.]
MA3 : Minus common A type, plug connector lead wire length 3000mm※[118in.]
MB : Minus common B type, plug connector lead wire length 300mm※[12in.]
MB3 : Minus common B type, plug connector lead wire length 3000mm※[118in.]
MC : Minus common C type, plug connector lead wire length 300mm※[12in.]
MC3 : Minus common C type, plug connector lead wire length 3000mm※[118in.]

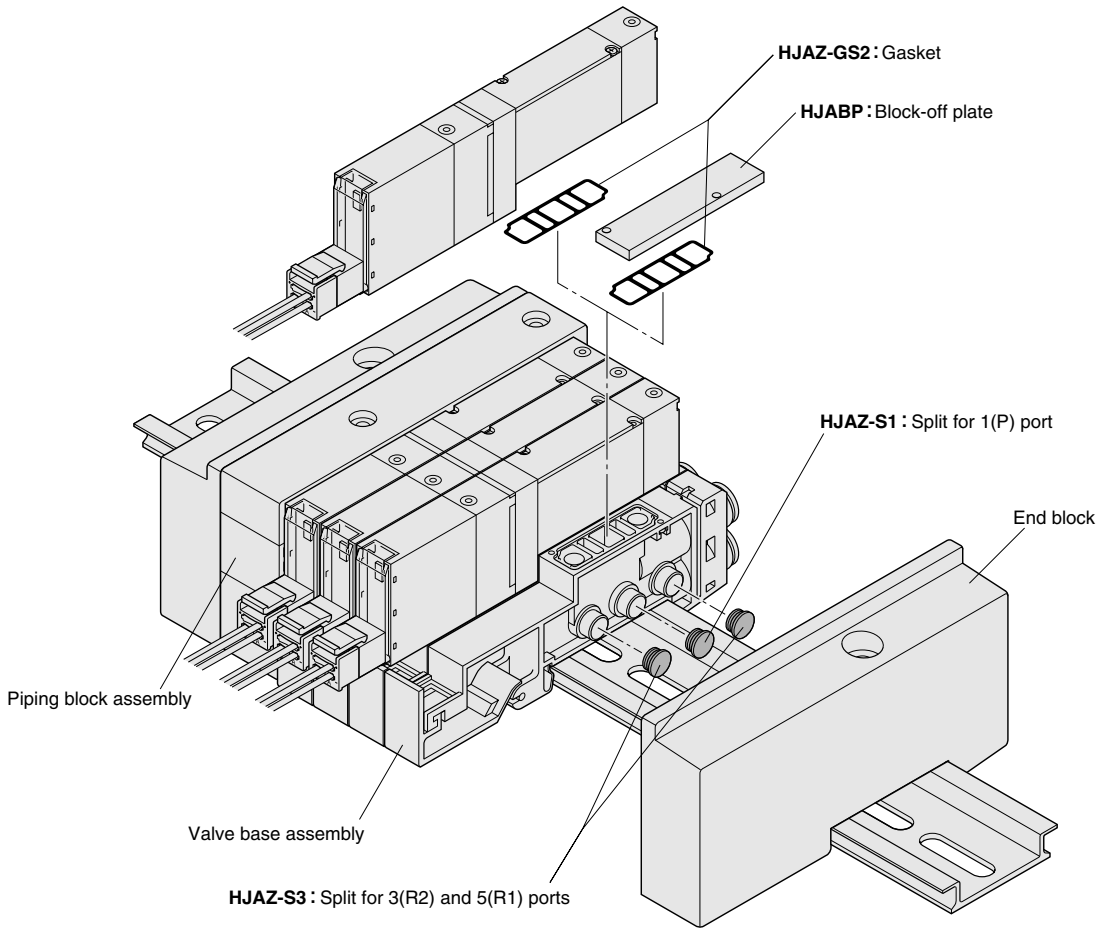
※For details, see p.5.

Valve base assembly (valve base and gasket)

HJAZ - □

Piping specification

VJ1/8 : With 1/8 tube fitting
VJ5/32 : With 5/32 tube fitting
VJ1/4 : With 1/4 tube fitting



Manifold Order Code Example (6 units of HJA series)

HJAM6NJ-JR

stn.1～2 HJA10A5-PS-J1/8-D4
stn.3～5 HJA10A6-PS-J1/8-D4
stn.6 HJABP-J1/8

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

Precautions for Order Code

● **Order for valves only**

Place orders by **"Single Valve Unit Order Code"** on p. 17.
For wiring specifications, **Blank** (plug-in type valve) cannot be selected.
For common terminal wiring connections, order separately the common connector assemblies listed left.

Split Manifold Plug-in Type Order Code

Left side　　Right side

■Piping block specification (air supply and exhaust)

-JR :1(P) and 3·5(R) ports 5/16 tube fitting right-side mounting
-JL :1(P) and 3·5(R) ports 5/16 tube fitting left-side mounting
-JD :1(P) and 3·5(R) ports 5/16 tube fitting both-side mounting
-JR1/4 :1(P) and 3·5(R) ports 1/4 tube fitting right-side mounting
-JL1/4 :1(P) and 3·5(R) ports 1/4 tube fitting left-side mounting
-JD1/4 :1(P) and 3·5(R) ports 1/4 tube fitting both-side mounting
-JR3/8 :1(P) and 3·5(R) ports 3/8 tube fitting right-side mounting
-JL3/8 :1(P) and 3·5(R) ports 3/8 tube fitting left-side mounting
-JD3/8 :1(P) and 3·5(R) ports 3/8 tube fitting both-side mounting

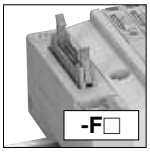
The photo shows the **-JR** type.

-MR :1(P) port 5/16 tube fitting, 3·5(R) ports built-in muffler right-side mounting
-ML :1(P) port 5/16 tube fitting, 3·5(R) ports built-in muffler left-side mounting
-MD :1(P) port 5/16 tube fitting, 3·5(R) ports built-in muffler both-side mounting
-MR1/4 :1(P) port 1/4 tube fitting, 3·5(R) ports built-in muffler right-side mounting
-ML1/4 :1(P) port 1/4 tube fitting, 3·5(R) ports built-in muffler left-side mounting
-MD1/4 :1(P) port 1/4 tube fitting, 3·5(R) ports built-in muffler both-side mounting
-MR3/8 :1(P) port 3/8 tube fitting, 3·5(R) ports built-in muffler right-side mounting
-ML3/8 :1(P) port 3/8 tube fitting, 3·5(R) ports built-in muffler left-side mounting
-MD3/8 :1(P) port 3/8 tube 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. 33.

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 accordance with the mounted valve specifications.Note

-D

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

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

■Common pre-wiring

Blank
Plus common

-CM
Minus common

■Voltage

-D4
24VDC

-D5 Note4
12VDC

Model	Valve units	Piping block specification (air supply and exhaust)	Wiring specification	Wiring connection specification	Common pre-wiring	Voltage
Manifold code						
HJAM	2 ⋮ □ Note1	-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. 27.

■Model

HJA10
Standard type

HJA10L
Low current type

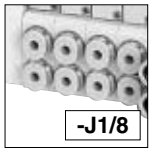
■Manual override

Non-locking type

Locking protruding type

■Manifold fitting specification

With 1/8 tube fitting



With 5/32 tube fitting

With 1/4 tube fitting

■Back pressure preventive valve

Blank
Without back pressure preventive valve

-E2
With back pressure preventive valve

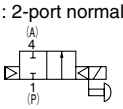
■Block-off plate wiring specification

Blank
This is wiring for the double solenoid.

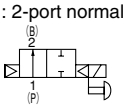
-S
When **-S** is designated, the block-off plate wiring of the station is changed for the single solenoid.

■Valve specification

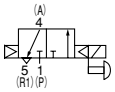
A1 : 2-port normally closed



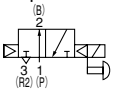
A2 : 2-port normally open



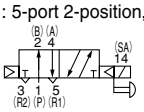
A3 : 3-port normally closed



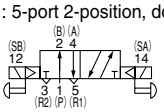
A4 : 3-port normally open



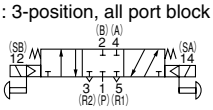
A5 : 5-port 2-position, single



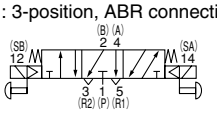
A6 : 5-port 2-position, double



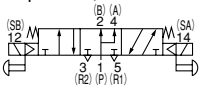
A7 : 3-position, all port block



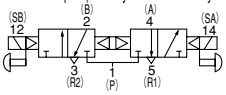
A8 : 3-position, ABR connection



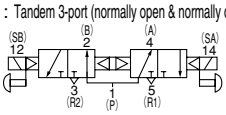
A9 : 3-position, PAB connection



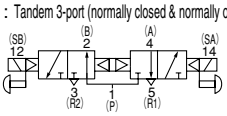
AA : Tandem 3-port (normally closed & normally closed)



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

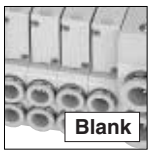


AC : Tandem 3-port (normally closed & normally open)

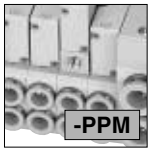


■Individual air supply spacer

Without spacer



With individual air supply spacer



■Split

Blank : Without split
-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
24VDC
-D5 Note4
12VDC

Station	Model	Valve specification	Manual override	Manifold fitting specification	Back pressure preventive valve	Individual air supply spacer	Split	Block-off plate wiring specification	Voltage
Mounting valve code									
stn. 1 ⋮ stn.□ Note2	HJA10 HJA10L	A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC	Blank -83	-J1/8 -J5/32 -J1/4	Blank -E2	Blank -PPM	Blank -S1 Note3 -S3 Note3 -SA Note3	Blank -S	-D4 -D5 Note4
	HJABPP (for block-off plate)								

Notes: 2. Valve mounting location is from the left, with solenoid on top, and 4(A) and 2(B) ports in front.
3. Splits can be installed only when piping blocks are mounted on both sides. In addition, only 1 location of each split can be mounted in one manifold for **-SA**, or one each split for **-S1** and **-S3**, for a total of two locations. When in delivery, the designated splits are mounted between the designated station and the station to its immediate left (the next smaller stn. No.).
4. **-D5**(12VDC) is not available in the low current type.

Additional Parts Order Code for Split Manifold Plug-in Type

Manifold parts

HJAZ - □

Parts description
GS2 : Gasket (for split type)
E2 : Back pressure preventive valve (2 pcs. for split type, and 1 pce. gasket)
J1/8 : 2 pcs.1/8 tube fittings, and 1 pce. stopper pin
J5/32 : 2 pcs.5/32 tube fittings, and 1 pce. stopper pin
J5/16 : 2 pcs.5/16 tube fittings, and 1 pce. stopper pin
J1/4 : 2 pcs. 1/4 tube fittings, and 1 pce. stopper pin
J1/4P : 2 pcs. 1/4 tube fittings for 1(P) and 3・5(R) ports, and 1 pce. stopper pin
J3/8 : 2 pcs. 3/8 tube fittings, and 1 pce. stopper pin
M : Muffler for piping block
PPM : Individual air supply spacer (spacer body, gasket, 2 mounting screws, and connector Ass'y)
S1 : Split for 1(P) port
S3 : Split for 3(R2) and 5(R1) ports
SA : Split for 1(P) port, 3(R2) and 5(R1) ports

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

HJABPP

Piping block assembly

HJAZ - □

Piping specification
PJ : 1(P) and 3・5(R) ports 5/16 tube fitting
PJ1/4 : 1(P) and 3・5(R) ports 1/4 tube fitting
PJ3/8 : 1(P) and 3・5(R) ports 3/8 tube fitting
PM : 1(P) port 5/16 tube fitting, 3・5(R) port built-in muffler
PM1/4 : 1(P) port 1/4 tube fitting, 3・5(R) port built-in muffler
PM3/8 : 1(P) port 3/8 tube fitting, 3・5(R) port built-in muffler

Wiring block assembly (one set)

HJAZ - □ **-** □ **-** □

Voltage
D4 : DC24V
D5 : DC12V

Common pre-wiring
Blank : Plus common
CM : Minus 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)

HJAZ - EP

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

HJAZ - □ **-** □ **-** □

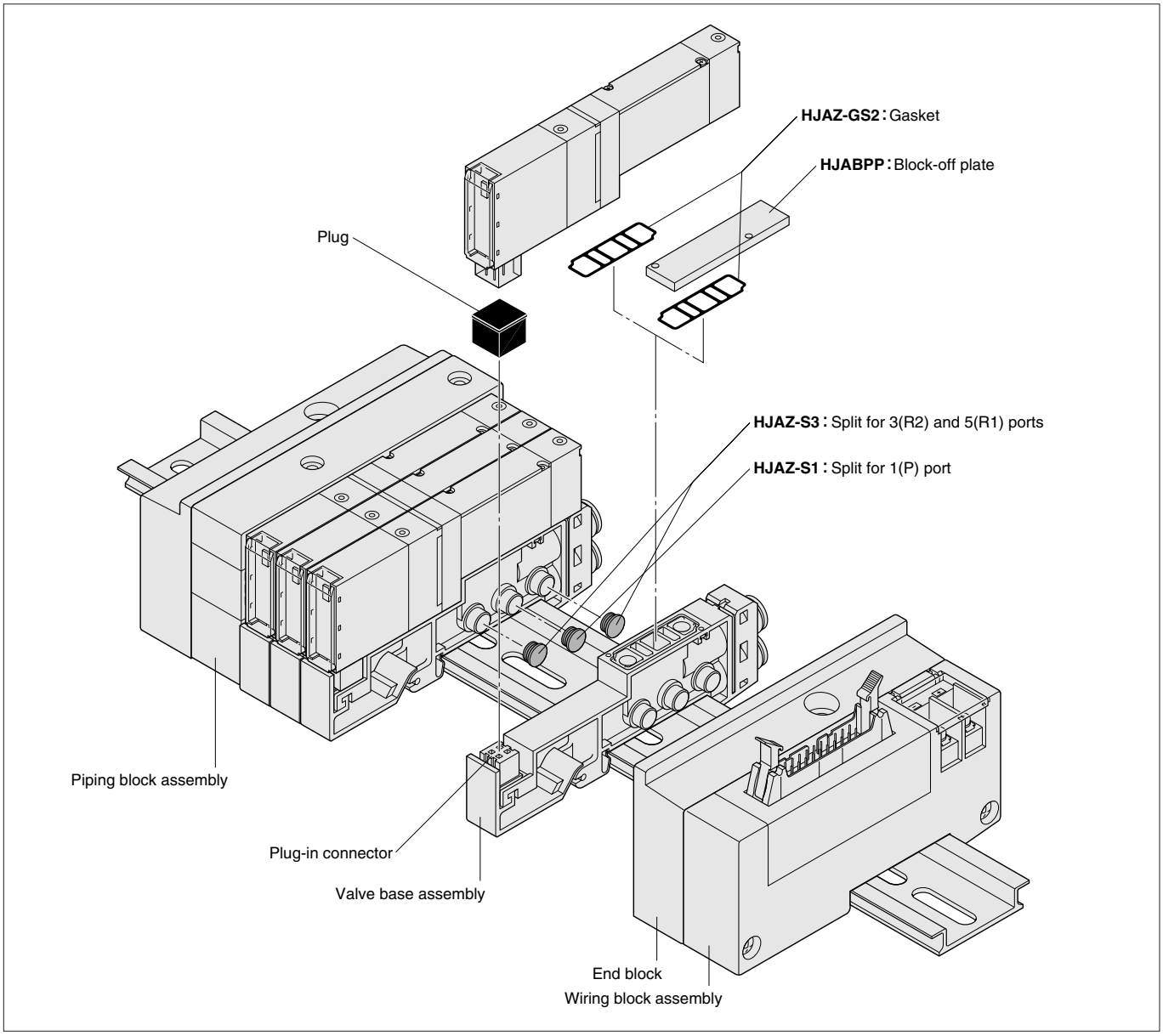
Common pre-wiring
Blank: Plus common
CM : Minus common

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

Piping specification
VJ1/8 : With 1/8 tube fitting
VJ5/32 : With 5/32 tube fitting
VJ1/4 : With 1/4 tube fitting

■Table for maximum number of valve units, by wiring specification

		Maximum number of units	
		Wiring connection specification	
Wiring specification	Max. control pts.	Packed wiring (**Blank**)	Double wiring (**-D**)
F200□ Flat cable (20P)	16 points	Varies depending on the mounted number of single solenoids, double solenoids and block-off plates. The number of controlled solenoids should be designated at the maximum number of control points or less. Max. 20 units possible.	8 units
F201□ Flat cable (20P)	16 points		8 units
F260□ Flat cable (26P)	20 points		10 units
D250□ D-sub connector (25P)	16 points		8 units
D251□ D-sub connector (25P)	20 points		10 units
D370U D-sub connector (37P)	32 points		16 units



Manifold Order Code Example (8 units of HJA series)

HJAM8PJ-JR-F201-D4

stn.1～4 HJA10A5-J1/8-D4
stn.5～7 HJA10A6-J1/8-D4
stn.8 HJABPP-J1/8

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

Precautions for Order Code

● **Order for valves only**

Place orders by **"Single Valve Unit Order Code"** on p.17.
The wiring specification, however, is compatible with the **Blank** (plug-in type) only.

● **Wiring connection specification**

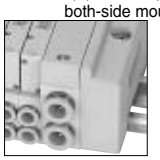
Blank (packed wiring) : Wiring is made accordance with the mounted valve specifications.
-D (double wiring) : Wiring is always for the double solenoid, regardless of the mounted valve specifications.

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

Serial Transmission Type Order Code

■Piping block specification (air supply and exhaust)

-JR :1(P) and 3･5(R) ports 5/16 tube fitting right-side mounting
-JL :1(P) and 3･5(R) ports 5/16 tube fitting left-side mounting
-JD :1(P) and 3･5(R) ports 5/16 tube fitting both-side mounting
-JR1/4 :1(P) and 3･5(R) ports 1/4 tube fitting right-side mounting
-JL1/4 :1(P) and 3･5(R) ports 1/4 tube fitting left-side mounting
-JD1/4 :1(P) and 3･5(R) ports 1/4 tube fitting both-side mounting
-JR3/8 :1(P) and 3･5(R) ports 3/8 tube fitting right-side mounting
-JL3/8 :1(P) and 3･5(R) ports 3/8 tube fitting left-side mounting
-JD3/8 :1(P) and 3･5(R) ports 3/8 tube fitting both-side mounting



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

-MR :1(P) port 5/16 tube fitting, 3･5(R) ports built-in muffler right-side mounting
-ML :1(P) port 5/16 tube fitting, 3･5(R) ports built-in muffler left-side mounting
-MD :1(P) port 5/16 tube fitting, 3･5(R) ports built-in muffler both-side mounting
-MR1/4 :1(P) port 1/4 tube fitting, 3･5(R) ports built-in muffler right-side mounting
-ML1/4 :1(P) port 1/4 tube fitting, 3･5(R) ports built-in muffler left-side mounting
-MD1/4 :1(P) port 1/4 tube fitting, 3･5(R) ports built-in muffler both-side mounting
-MR3/8 :1(P) port 3/8 tube fitting, 3･5(R) ports built-in muffler right-side mounting
-ML3/8 :1(P) port 3/8 tube fitting, 3･5(R) ports built-in muffler left-side mounting
-MD3/8 :1(P) port 3/8 tube 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. 12.

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

■Wiring connection specification

Blank

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

-D

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

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

Model	Valve units		Piping block specification (air supply and exhaust)	Serial transmission block specification	Wiring connection specification
Manifold code					
HJAM	**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. 31.

■Model

HJA10
Standard type

HJA10L
Low current type

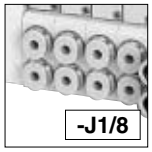
■Manual override

Non-locking type

Locking protruding type

■Manifold fitting specification

With 1/8 tube fitting



With 5/32 tube fitting

With 1/4 tube fitting

■Back pressure preventive valve

Blank
Without back pressure preventive valve

-E2
With back pressure preventive valve

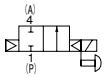
■Block-off plate wiring specification

Blank
Wiring is always for the double solenoid.

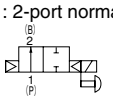
-S
When **-S** is designated, the block-off plate wiring of the station is changed for the single solenoid.

■Valve specification

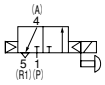
A1 : 2-port normally closed



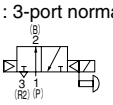
A2 : 2-port normally open



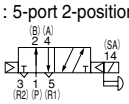
A3 : 3-port normally closed



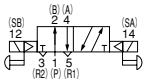
A4 : 3-port normally open



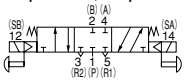
A5 : 5-port 2-position, single



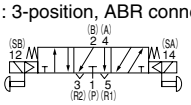
A6 : 5-port 2-position, double



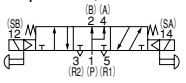
A7 : 3-position, all port block



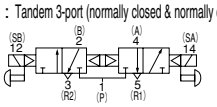
A8 : 3-position, ABR connection



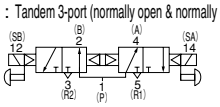
A9 : 3-position, PAB connection



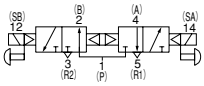
AA : Tandem 3-port (normally closed & normally closed)



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

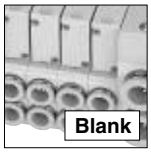


AC : Tandem 3-port (normally closed & normally open)

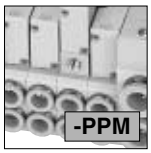


■Individual air supply spacer

Without spacer



With individual air supply spacer



■Split

Blank : Without split
-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
24VDC

Station	Model	Valve specification	Manual override	Manifold fitting specification	Back pressure preventive valve	Individual air supply spacer	Split	Block-off plate wiring specification	Voltage
Mounting valve code									
stn. 1 ⋮ stn.□ Note2	HJA10 HJA10L	A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC	Blank -83	-J1/8 -J5/32 -J1/4	Blank -E2	Blank -PPM	Blank -S1 Note3 -S3 Note3 -SA Note3	Blank -S	-D4
	HJABPP (for block-off plate)								

Notes: 2. Valve mounting location is from the left, with solenoid on top, and 4(A) and 2(B) ports in front.
3. Splits can be installed only when piping blocks are mounted on both sides. In addition, only 1 location of each split can be mounted in one manifold for **-SA,** or one each split for **-S1** and **-S3**, for a total of two locations. When in delivery, the designated splits are mounted between the designated station and the station to its immediate left (the next smaller stn. No.).

Additional Parts Order Code for Serial Transmission Type

Manifold parts

HJAZ - □

Parts description

GS2 : Gasket (for split type)
E2 : Back pressure preventive valve (2 pcs. for split type, and 1 pce. gasket)
J1/8 : 2 pcs. 1/8 tube fittings, and 1 pce. stopper pin
J5/32 : 2 pcs. 5/32 tube fittings, and 1 pce. stopper pin
J5/16 : 2 pcs. 5/16 tube fittings, and 1 pce. stopper pin
J1/4 : 2 pcs. 1/4 tube fittings, and 1 pce. stopper pin
J1/4P : 2 pcs. 1/4 tube fittings for 1(P) and 3・5(R) ports, and 1 pce. stopper pin
J3/8 : 2 pcs. 3/8 tube fittings, and 1 pce. stopper pin
M : Muffler for piping block
PPM : Individual air supply spacer (spacer body, gasket, 2 mounting screws, and connector Ass'y)
S1 : Split for 1(P) port
S3 : Split for 3 (R2) and 5(R1) ports
SA : Split for 1(P) port, 3(R2) and 5(R1) ports

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

HJABPP

Piping block assembly

HJAZ - □

Piping specification

PJ : 1(P) and 3・5(R) ports 5/32 tube fitting
PJ1/4 : 1(P) and 3・5(R) ports 1/4 tube fitting
PJ3/8 : 1(P) and 3・5(R) ports 3/8 tube fitting
PM : 1(P) port 5/32 tube fitting, 3・5(R) port built-in muffler
PM1/4 : 1(P) port 1/4 tube fitting, 3・5(R) port built-in muffler
PM3/8 : 1(P) port 3/8 tube fitting, 3・5(R) port built-in muffler

End blocks (one set of left and right)

HJAZ - EP

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

HJAZ - □ **- F**

Piping specification

VJ1/8 : With 1/8 tube fitting
VJ5/32 : With 5/32 tube fitting
VJ1/4 : With 1/4 tube fitting

Serial transmission block (single unit)

HYS5 □ □

Options

Blank: For replacement of HJA Series serial transmission block
U : With flat cable (general purpose type) Note compatible with F201

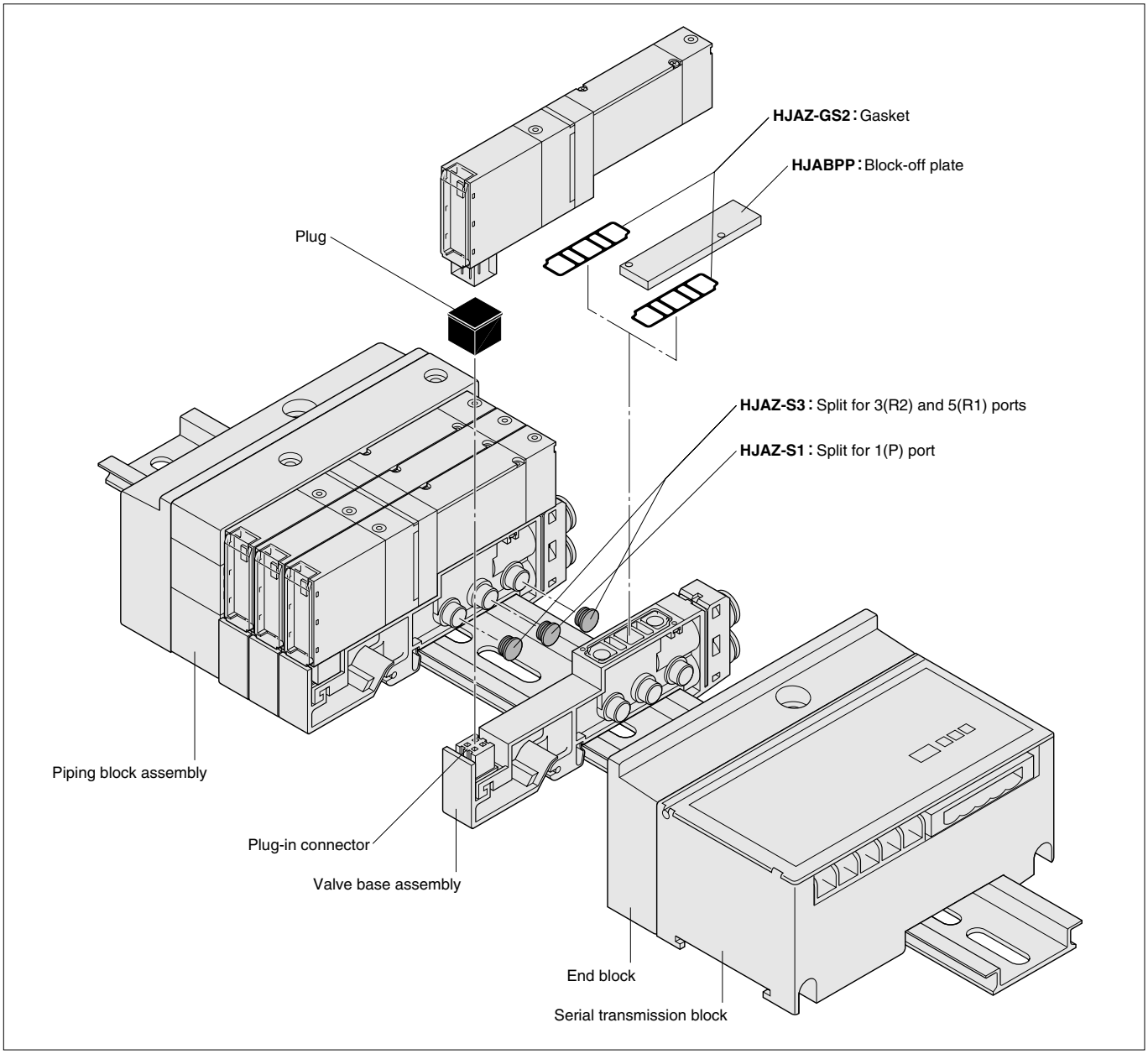
Note: For general purpose type, see p.12.

Serial transmission block specification

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

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

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



Manifold Order Code Example (8 units of HJA series)

HJAM8SJ-JR-A1

stn.1～4 HJA10A5-J1/8-D4
stn.5～7 HJA10A6-J1/8-D4
stn.8 HJABPP-J1/8

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

Precautions for Order Code

● **Order for valves only**
Place orders by **"Single Valve Unit Order Code"** on p.17.
The wiring specification, however, is compatible with the **Blank** (plug-in type) only.

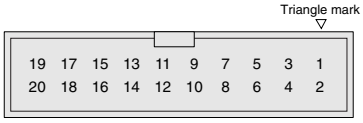
● **Wiring connection specification**
Blank (packed wiring) : Wiring is made accordance with the mounted valve specifications.
-D (double wiring) : Wiring is always for the double solenoid, regardless of the mounted valve specifications.

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

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

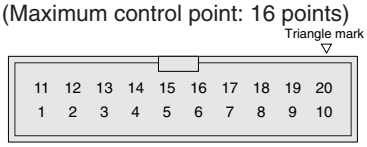
Flat cable connector (20-pin)

●**-F200**□ (Maximum control point: 16 points)



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

●**-F201**□ (Maximum control point: 16 points)



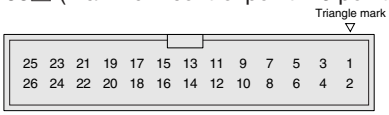
1～8 : Control pin
11～18 : Control pin
9, 19 : Minus pin (Short-circuited within the wiring block)
10, 20 : Plus pin (Short-circuited within the wiring block)

Caution: The above pin No. are allocated for 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 or the Valve General Catalog Ver.2.

Flat cable connector (26-pin)

●**-F260**□ (Maximum control point: 20 points)

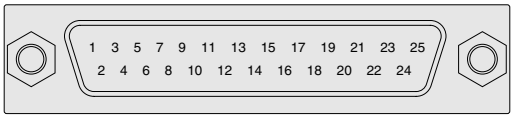


1～20 : Control pin
23, 24 : Minus pin (Short-circuited within the wiring block)
25, 26 : Plus pin (Short-circuited within the wiring block)

※For the relationship between the pin No. (terminal No.) and the corresponding solenoid, see p. 35～38.

D-sub connector (25-pin)

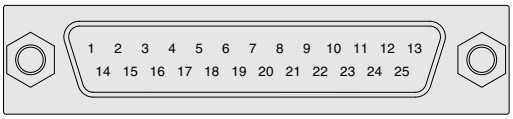
●**-D250**□ (Maximum control point: 16 points)



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

Caution: The above pin No. are conveniently allocated based on the solenoid valve wiring sequence.
Differs from the pin locations and pin No. (marked) prescribed in JIS-X5101 for the data circuit end (DCE) device.

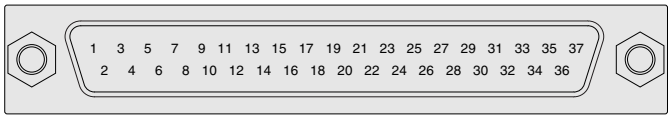
●**-D251**□ Pin locations based on JIS (Maximum control point: 20 points)



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

D-sub connector (37-pin)

●**-D370U** (Maximum control point: 32 points)

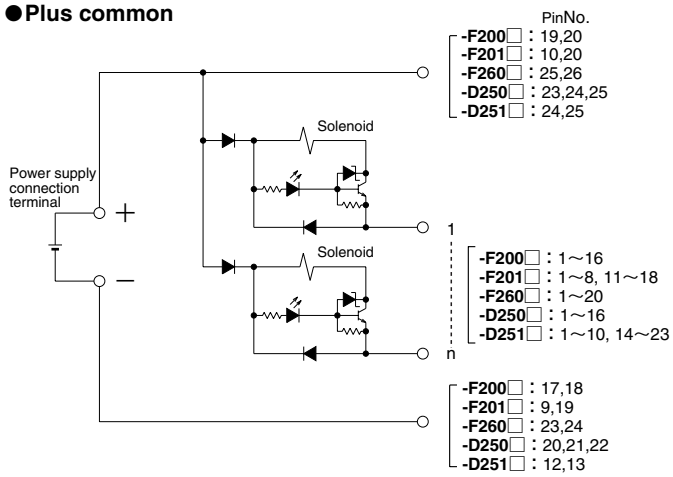


1～32 : Control pin
34, 35 : Common pin (For minus common)
36, 37 : Common pin (For plus common)

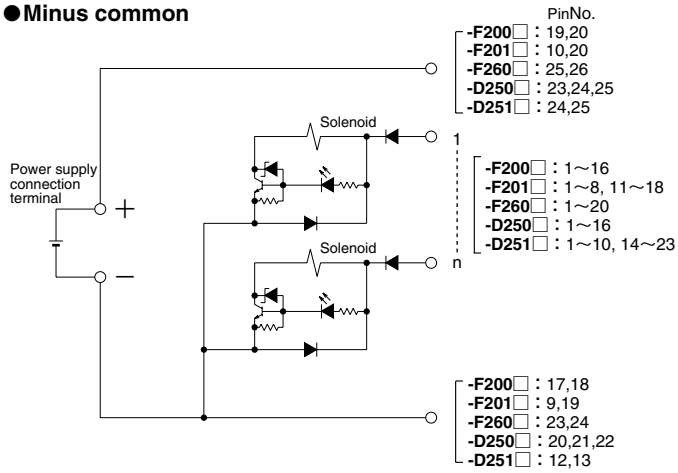
Caution: The above pin No. are conveniently allocated based on the solenoid valve wiring sequence.
Differs from the pin locations and pin No. (marked) prescribed in JIS-X5103 for the data circuit end (DCE) device.

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

●Plus common

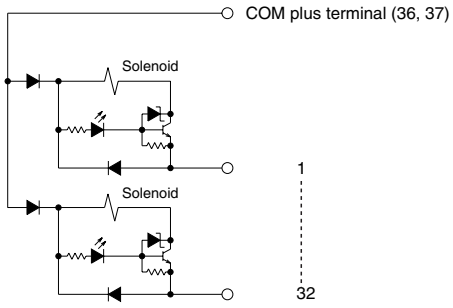


●Minus common

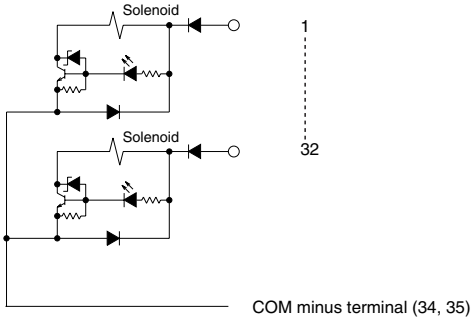


D-sub connector -D370U

●Plus common



●Minus common



Order Code

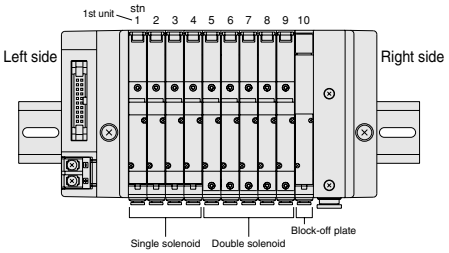
Pin No. and Corresponding Solenoid (For Split Manifold Plug-in Type)

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

Flat cable connector (20-pin)

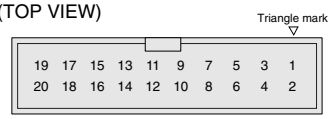
Wiring specification **-F200**□ (Maximum control point: 16 points)

Example 1 **HJAM10PJ-JR-F200-D4** **stn.1～4 HJA10A5-J5/32-D4**
stn.5～9 HJA10A6-J5/32-D4
stn.10 HJABPP-J5/32



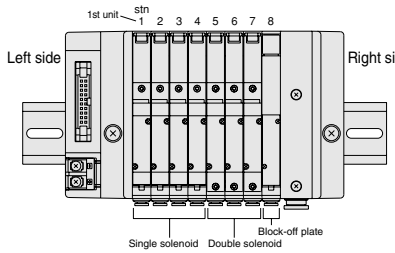
Number of units : 10 units
Wiring specification : **-F200**
Wiring connection specification :
Blank (packed wiring)

(TOP VIEW)



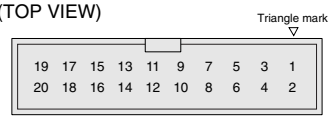
Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	+	−	10A	9A	8A	7A	6A	5A	3A	1A
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	+	−	10B	9B	8B	7B	6B	5B	4A	2A

Example 2 **HJAM8PJ-JR-F200-D-D4** **stn.1～4 HJA10A5-J5/32-D4**
stn.5～7 HJA10A6-J5/32-D4
stn.8 HJABPP-J5/32



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

(TOP VIEW)

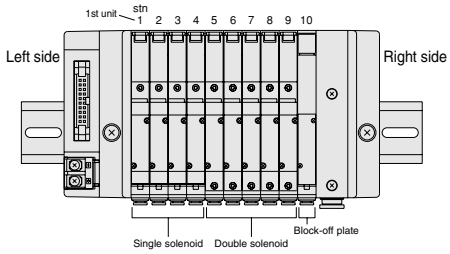


Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	+	−	8A	7A	6A	5A	4A	3A	2A	1A
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	+	−	8B	7B	6B	5B	4B	3B	2B	1B

Flat cable connector (20-pin)

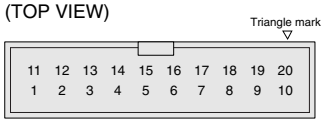
Wiring specification **-F201**□ (Maximum control point: 16 points)

Example 1 **HJAM10PJ-JR-F201-D4** **stn.1～4 HJA10A5-J5/32-D4**
stn.5～9 HJA10A6-J5/32-D4
stn.10 HJABPP-J5/32



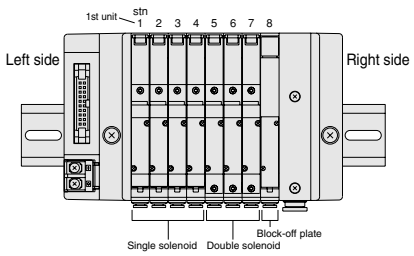
Number of units : 10 units
Wiring specification : **-F201**
Wiring connection specification :
Blank (packed wiring)

(TOP VIEW)



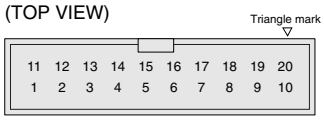
Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	7A	7B	8A	8B	9A	9B	10A	10B	−	+
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1A	2A	3A	4A	5A	5B	6A	6B	−	+

Example 2 **HJAM8PJ-JR-F201-D-D4** **stn.1～4 HJA10A5-J5/32-D4**
stn.5～7 HJA10A6-J5/32-D4
stn.8 HJABPP-J5/32



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

(TOP VIEW)



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

Caution: Connector pin No. are allocated for convenience.
Use the ▽ mark as a reference.

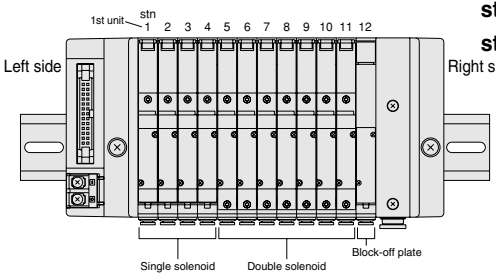
Notes: 1. The valve No.1A, 1B, 2A, 2B··· numbers show the stn. numbers in order, while the letters A and B show the A and B sides of the solenoid.
2. The stn. No. are counted from the left, 1, 2···, with the solenoid on top and the valve in front.
3. If selecting wiring connection specification **-D**, all wiring becomes double wiring, regardless of valve specifications.
4. The wiring of the block-off plate is normally double wiring (allocated 2 control pins to 1 unit), regardless of the wiring connection specifications. However, when **-S** is designated for the block-off plate wiring specification, the block-off plate wiring of the station is changed for the single solenoid.
5. Connector pin No. are allocated for convenience. Use the ▽ mark as a reference.

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

Flat cable connector (26-pin)

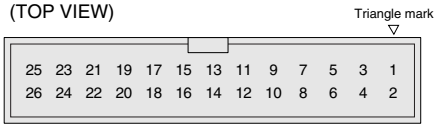
●Wiring specification **-F260**□ (Maximum control point: 20 points)

Example 1 **HJAM12PJ-JR-F260-D4** **stn.1～4 HJA10A5-J5/32-D4**
stn.5～11 HJA10A6-J5/32-D4
stn.12 HJABPP-J5/32



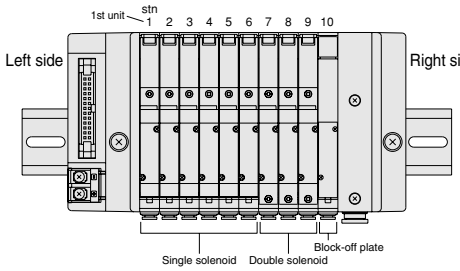
Number of units : 12 units
Wiring specification : **-F260**
Wiring connection specification :
Blank (packed wiring)

(TOP VIEW)



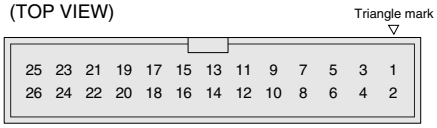
Pin No.	25	23	21	19	17	15	13	11	9	7	5	3	1
Valve No.	+	−		12A	11A	10A	9A	8A	7A	6A	5A	3A	1A
Pin No.	26	24	22	20	18	16	14	12	10	8	6	4	2
Valve No.	+	−		12B	11B	10B	9B	8B	7B	6B	5B	4A	2A

Example 2 **HJAM10PJ-JR-F260-D-D4** **stn.1～6 HJA10A5-J5/32-D4**
stn.7～9 HJA10A6-J5/32-D4
stn.10 HJABPP-J5/32



Number of units : 10 units
Wiring specification : **-F260**
Wiring connection specification :
-D (double wiring)

(TOP VIEW)



Pin No.	25	23	21	19	17	15	13	11	9	7	5	3	1
Valve No.	+	−		10A	9A	8A	7A	6A	5A	4A	3A	2A	1A
Pin No.	26	24	22	20	18	16	14	12	10	8	6	4	2
Valve No.	+	−		10B	9B	8B	7B	6B	5B	4B	3B	2B	1B

Notes: 1. The valve No.1A, 1B, 2A, 2B··· numbers show the stn. numbers in order, while the letters A and B show the A and B sides of the solenoid.
2. The stn. No. are counted from the left, 1, 2···, with the solenoid on top and the valve in front.
3. If selecting wiring connection specification **-D**, all wiring becomes double wiring, regardless of valve specifications.
4. The wiring of the block-off plate is normally double wiring (allocated 2 control pins to 1 unit), regardless of the wiring connection specifications. However, when **-S** is designated for the block-off plate wiring specification, the block-off plate wiring of the station is changed for the single solenoid.
5. Connector pin No. are allocated for convenience. Use the ▽ mark as a reference.

Pin No. and Corresponding Solenoid (For Split Manifold Plug-in Type)

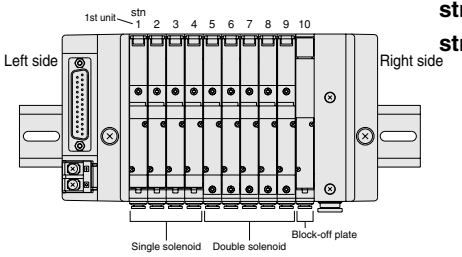
The examples below show the relationship between the split manifold pin No. and the corresponding solenoid.
The mounting example shows the maximum number of control points in use.

D-sub connector (25-pin)

●Wiring specification **-D250**□ (Maximum control point: 16 points)

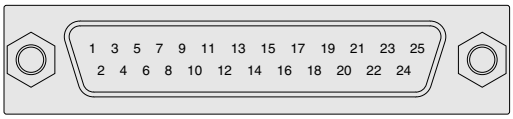
Caution: The connector pin No. are conveniently allocated based on the solenoid valve wiring sequence. Differs from the pin locations and pin No. (marked) prescribed in JIS-X5101 for the data circuit end (DCE) device.

Example 1 **HJAM10PJ-JR-D250-D4** **stn.1～4 HJA10A5-J5/32-D4**
stn.5～9 HJA10A6-J5/32-D4
stn.10 HJABPP-J5/32



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

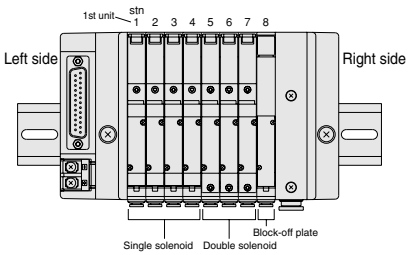
(TOP VIEW)



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			−	+	+

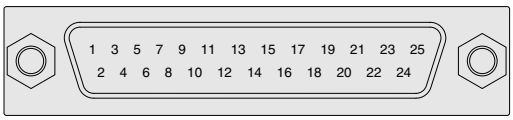
Pin No.	2	4	6	8	10	12	14	16	18	20	22	24
Valve No.	2A	4A	5B	6B	7B	8B	9B	10B		−	−	+

Example 2 **HJAM8PJ-JR-D250-D-D4** **stn.1～4 HJA10A5-J1/8-D4**
stn.5～7 HJA10A6-J1/8-D4
stn.8 HJABPP-J1/8



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

(TOP VIEW)



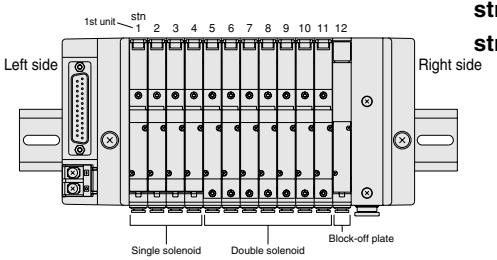
Pin No.	1	3	5	7	9	11	13	15	17	19	21	23	25
Valve No.	1A	2A	3A	4A	5A	6A	7A	8A			−	+	+

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)

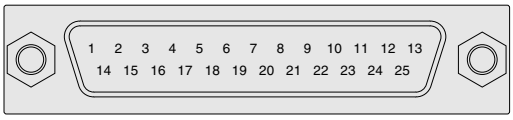
●Wiring specification **-D251**□ Pin locations based on JIS specification (Maximum control point: 20 points)

Example 1 **HJAM12PJ-JR-D251-D4** **stn.1～4 HJA10A5-J1/8-D4**
stn.5～11 HJA10A6-J1/8-D4
stn.12 HJABPP-J1/8



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

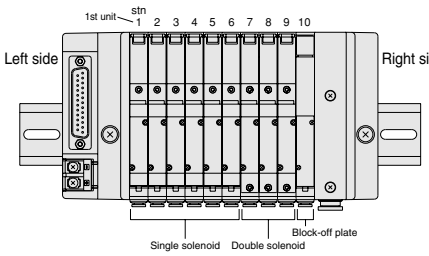
(TOP VIEW)



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		−	−

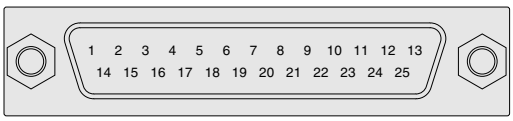
Pin No.	14	15	16	17	18	19	20	21	22	23	24	25
Valve No.	8A	8B	9A	9B	10A	10B	11A	11B	12A	12B	+	+

Example 2 **HJAM10PJ-JR-D251-D-D4** **stn.1～6 HJA10A5-J1/8-D4**
stn.7～9 HJA10A6-J1/8-D4
stn.10 HJABPP-J1/8



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. The valve No.1A, 1B, 2A, 2B··· numbers show the stn. numbers in order, while the letters A and B show the A and B sides of the solenoid.
2. The stn. No. are counted from the left, 1, 2···, with the solenoid on top and the valve in front.
3. If selecting wiring connection specification **-D**, all wiring becomes double wiring, regardless of valve specifications.
4. The wiring of the block-off plate is normally double wiring (allocated 2 control pins to 1 unit), regardless of the wiring connection specifications. However, when **-S** is designated for the block-off plate wiring specification, the block-off plate wiring of the station is changed for the single solenoid.

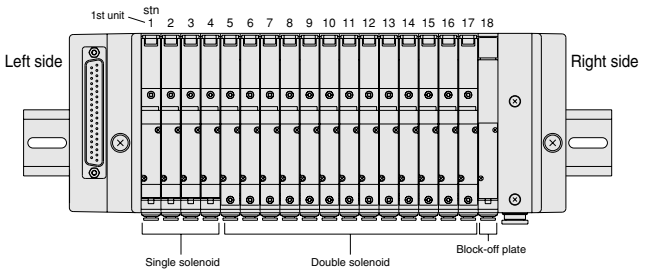
The examples below show the relationship between the split manifold pin No. and the corresponding solenoid.
The mounting example shows the maximum number of control points in use.

D-sub connector (37-pin)

●Wiring specification **-D370U** (Maximum control point: 32 points)

Caution: The connector pin No. are conveniently allocated based on the solenoid valve wiring sequence. Differs from the pin locations and pin No. (marked) prescribed in JIS-X5103 for the data circuit end (DCE) device.

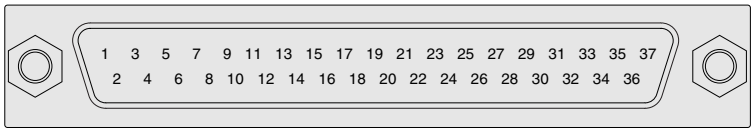
Example 1



HJAM18PJ-JR-D370U-D4 stn.1～4 HJA10A5-J1/8-D4
stn.5～17 HJA10A6-J1/8-D4
stn.18 HJABPP-J1/8

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

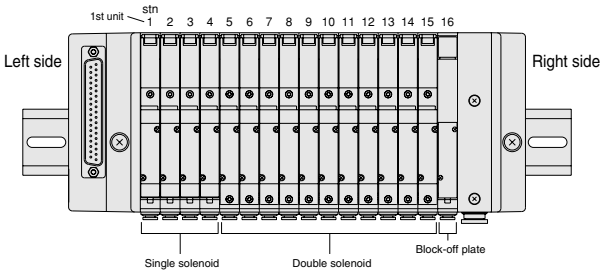
(TOP VIEW)



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		+

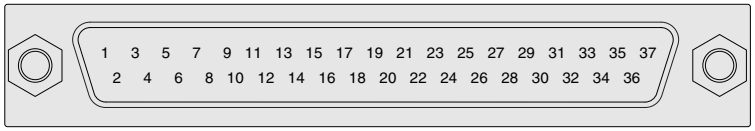
Example 2



HJAM16PJ-JR-D370U-D-D4 stn.1～4 HJA10A5-J1/8-D4
stn.5～15 HJA10A6-J1/8-D4
stn.16 HJABPP-J1/8

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. The valve No.1A, 1B, 2A, 2B··· numbers show the stn. numbers in order, while the letters A and B show the A and B sides of the solenoid.
2. The stn. No. are counted from the left, 1, 2···, with the solenoid on top and the valve in front.
3. If selecting wiring connection specification **-D**, all wiring becomes double wiring, regardless of valve specifications.
4. The wiring of the block-off plate is normally double wiring (allocated 2 control pins to 1 unit), regardless of the wiring connection specifications. However, when **-S** is designated for the block-off plate wiring specification, the block-off plate wiring of the station is changed for the single solenoid.

HJA Series Solenoid Valves

Specifications and Dimensions

HJA SERIES SPECIFICATIONS

Specifications

Basic Models and Functions

Item \ Basic model	HJA10□A1 HJA10□A2 HJA10□A3 HJA10□A4	HJA10□A5	HJA10□A6	HJA10□A7 HJA10□A8 HJA10□A9	HJA10□AA HJA10□AB HJA10□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	All port block, ABR and PAB connection	NC/NC, NO/NO, NC/NO

Remark: For the optional specifications and order code, see p.16.

Specifications

Item \ Basic model	HJA10□A1 HJA10□A2 HJA10□A3 HJA10□A4	HJA10□A5	HJA10□A6	HJA10□A7 HJA10□A8 HJA10□A9	HJA10□AA HJA10□AB HJA10□AC
Media	Air				
Operation method	Internal pilot type				
Effective area [Cv][Note1] mm²	3.5[0.19]			3.4[0.19]	3.5[0.19]
Port size [Note2]	10-32UNF, 1/8, 5/32, 1/4 tube fitting, 1/8NPT				
Lubrication	Not required				
Operating pressure range MPa{kgf/cm²}	0.2～0.7 {2～7.1} [29～102psi.]				
Proof pressure MPa{kgf/cm²}	1.05 {10.7} [152psi.]				
Response time (ON/OFF)[Note 3] ms	Max.15/15 (Max.15/20)		Max.15 (Max.20)	Max.15/25 (Max.15/35)	Max.15/20 (Max.15/30)
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.42.
2. For details, see the port size on p.42.
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 those switching from neutral state.
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			Min. 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

Port Size

Description/piping specification	2 (B), 4(A)	1(P)	3・5(R)
With sub-base	1/8NPT	1/8NPT	1/8NPT
Monoblock manifold	10-32UNF	1/8NPT	1/8NPT
Split manifold	1/8, 5/32, 1/4 tube fitting	5/16, 1/4, 3/8 tube fitting	5/16, 1/4, 3/8 tube fitting or muffler

Effective Area［Cv］

●When using as a single unit

mm²

Basic model	Effective area［Cv］
HJA10□A1-25	3.2［0.18］
HJA10□A2-25	
HJA10□A3-25	
HJA10□A4-25	
HJA10□A5-25	
HJA10□A6-25	
HJA10□A7-25	3.1［0.17］
HJA10□A8-25	
HJA10□A9-25	
HJA10□AA-25	3.2［0.18］
HJA10□AB-25	
HJA10□AC-25	

●When mounted on a manifold

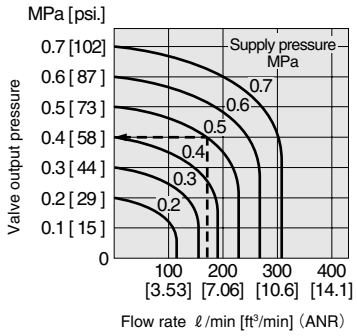
mm²

Manifold model / Valve model	**HJAM□A** Output port 5/32 tube fitting	**HJAM□N(P)(S)J** Output port 1/8 or 5/32 tube fitting	**HJAM□N(P)(S)J** Output port 1/4 tube fitting
HJA10□A1	2.8[0.16]	3.2[0.18]	3.5[0.19]
HJA10□A2			
HJA10□A3			
HJA10□A4			
HJA10□A5			
HJA10□A6			
HJA10□A7	2.7[0.15]	3.1[0.17]	3.4[0.19]
HJA10□A8			
HJA10□A9			
HJA10□AA	2.8[0.16]	3.2[0.18]	3.5[0.19]
HJA10□AB			
HJA10□AC			

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

Flow Rate

HJA10□



How to read the graph

If supply pressure is 0.5MPa [73psi.] and flow rate is 170 ℓ/min [6ft³/min] (ANR), the valve output pressure becomes 0.4MPa [58psi.].

Mass

Single Valve Unit Mass

g [oz]

Options / Valve specification	Wiring specification			Additional mass
	Blank **PN**	**PS** **MS**	**PS3** **MS3**	**25** (with sub-base)
HJA10□A1～A4	36[1.27]	40[1.41]	61[2.15]	51[1.80]
HJA10□A5				48[1.69]
HJA10□A6	44[1.55]	49[1.73]	81[2.86]	
HJA10□A7～A9	46[1.62]	51[1.80]	83[2.93]	
HJA10□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 output port specification	
	10-32UNF	
Monoblock Manifold **A** type	43[1.52]	70[2.47]

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 output port specification	Piping block				End block
	-J1/8 (1/8 tube fitting) **-J5/32** (5/32 tube fitting) **-J1/4** (1/4 tube fitting)	With fitting		Built-in muffler		
		5/16・1/4 tube fitting	3/8 tube fitting	5/16・1/4 tube fitting	3/8 tube fitting	
Non-plug-in type	(25.5×n)[(0.90×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 output port specification	Piping block				Wiring block				End block
	-J1/8 (1/8 tube fitting) **-J5/32** (5/32 tube fitting) **-J1/4** (1/4 tube fitting)	With fitting		Built-in muffler		**-F20□**	**-F26□**	**-D25□**	**-D370U**	
		5/16・1/4 tube fitting	3/8 tube fitting	5/16・1/4 tube fitting	3/8 tube fitting					
Plug-in type	(28×n)[(0.99×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 output port specification	Piping block				Serial transmission block			End block
	-J1/8 (1/8 tube fitting) **-J5/32** (5/32 tube fitting) **-J1/4** (1/4 tube fitting)	With fitting		Built-in muffler		**-A□**	**-B1**	**-D1**	
		5/16・1/4 tube fitting	3/8 tube fitting	5/16・1/4 tube fitting	3/8 tube fitting				
Serial transmission type	(28×n)[(0.99×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 : **HJAM8SJ-JR-B1**
stn.1～8 HJA10A6-J1/8-D4
(44×8)+(28×8)+67+129+123=895g
[(1.55×8)+(0.99×8)+2.36+4.55+4.34=31.57oz]

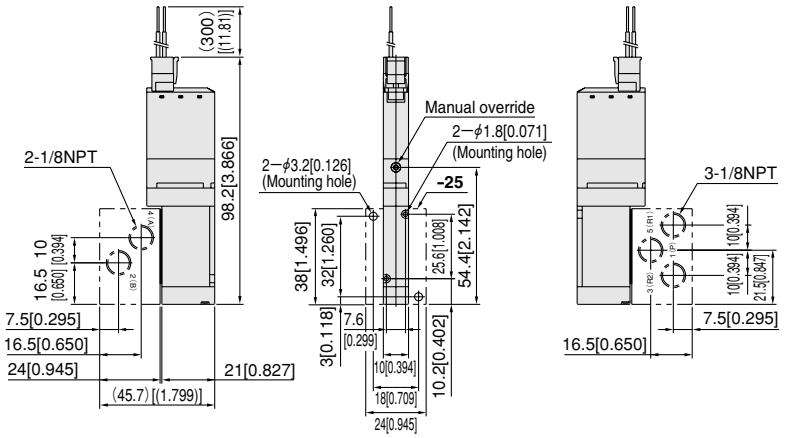
2-, 3-port single solenoid

HJA10□A1-□-PS
HJA10□A2-□-PS
HJA10□A3-□-PS
HJA10□A4-□-PS

S type plug connector

Caution

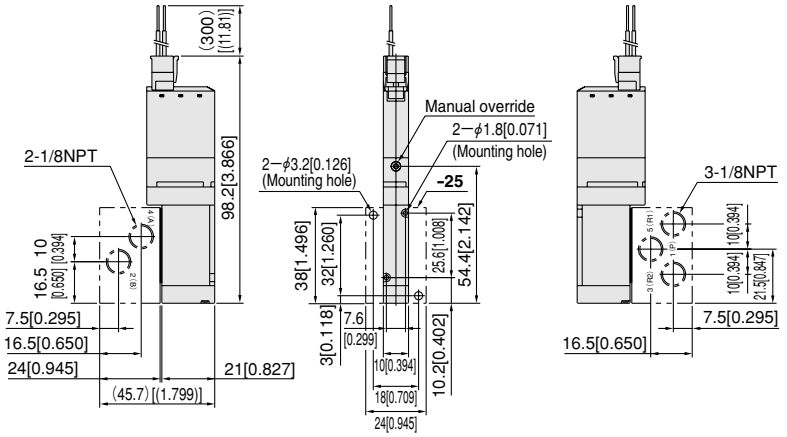
A1: 2-port normally closed type, plugged to 2 (B)
A2: 2-port normally open type, plugged to 4 (A)
A3: 3-port normally closed type, plugged to 2 (B)
A4: 3-port normally open type, plugged to 4 (A)



5-port single solenoid

HJA10□A5-□-PS

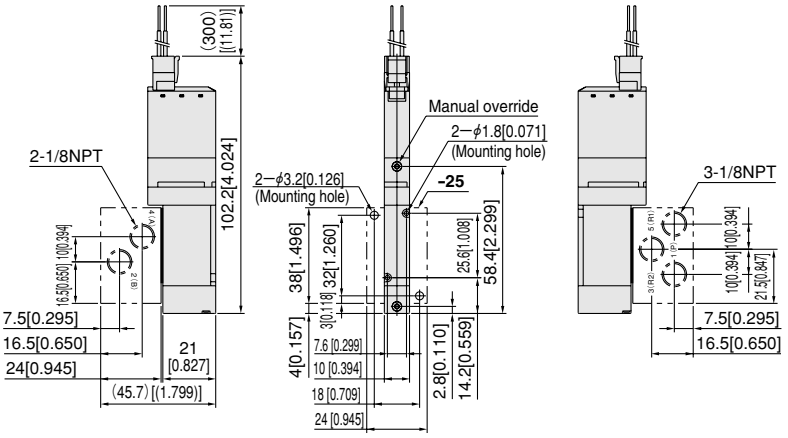
S type plug connector



5-port double solenoid

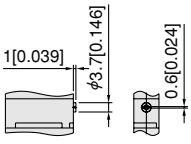
HJA10□A6-□-PS

S type plug connector

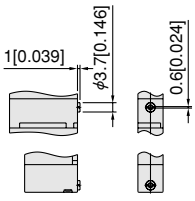


Options

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



For single solenoid



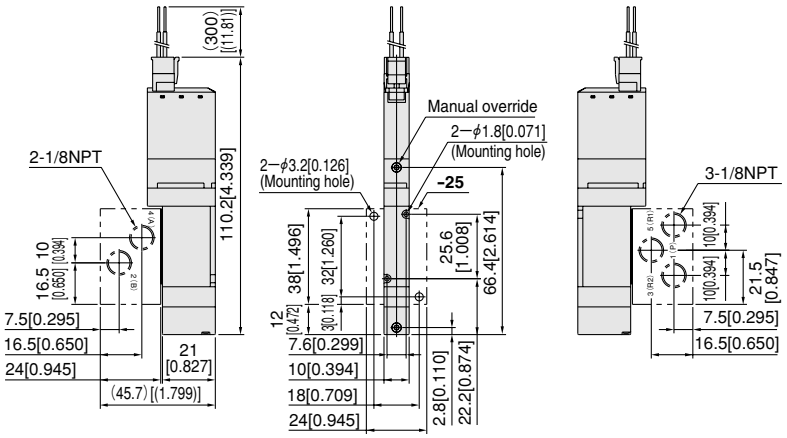
For double solenoid

HJA Series Dimensions of Single Valve Unit mm[in.]

5-port, 3-position

HJA10□A7-□-PS
HJA10□A8-□-PS
HJA10□A9-□-PS

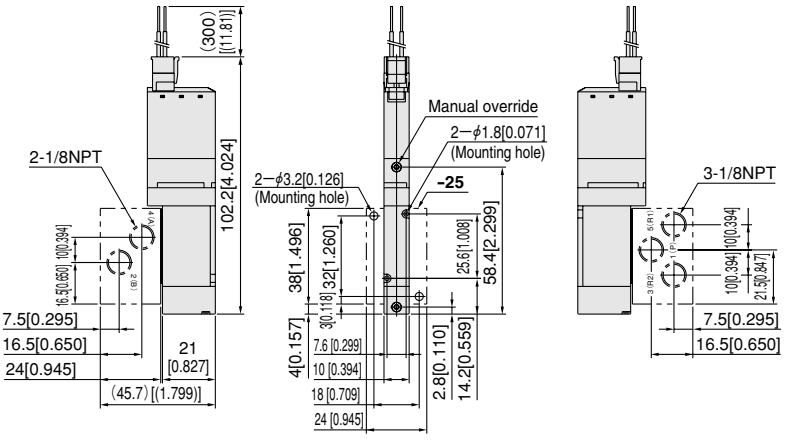
S type plug connector



Tandem 3-port, 4-position

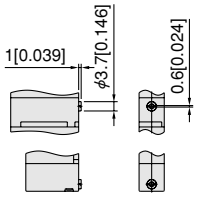
HJA10□AA-□-PS
HJA10□AB-□-PS
HJA10□AC-□-PS

S type plug connector

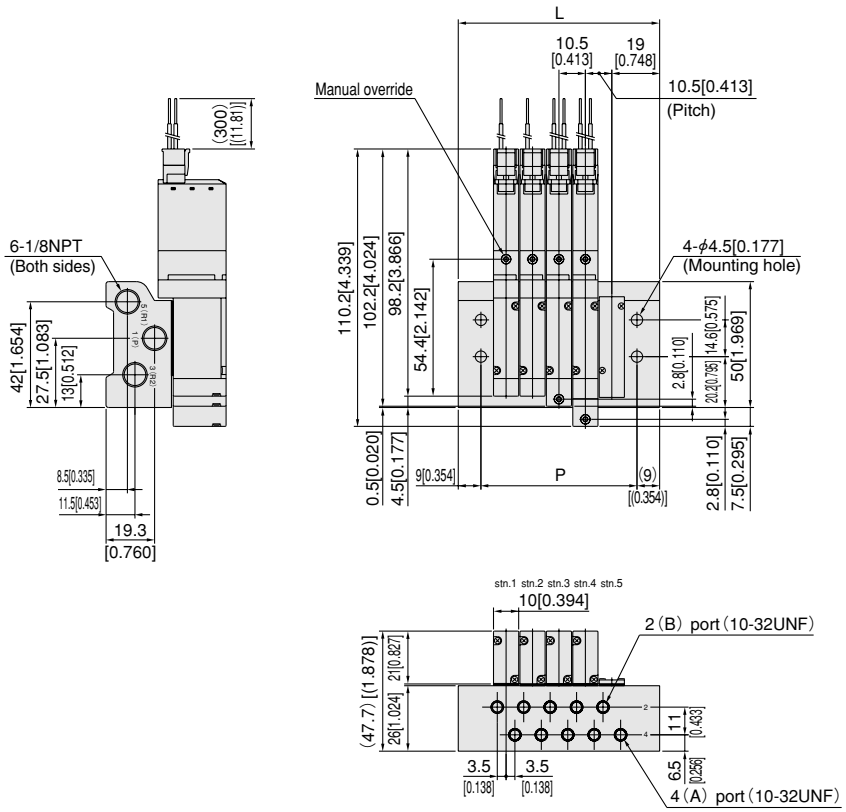


Options

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



HJAM□A



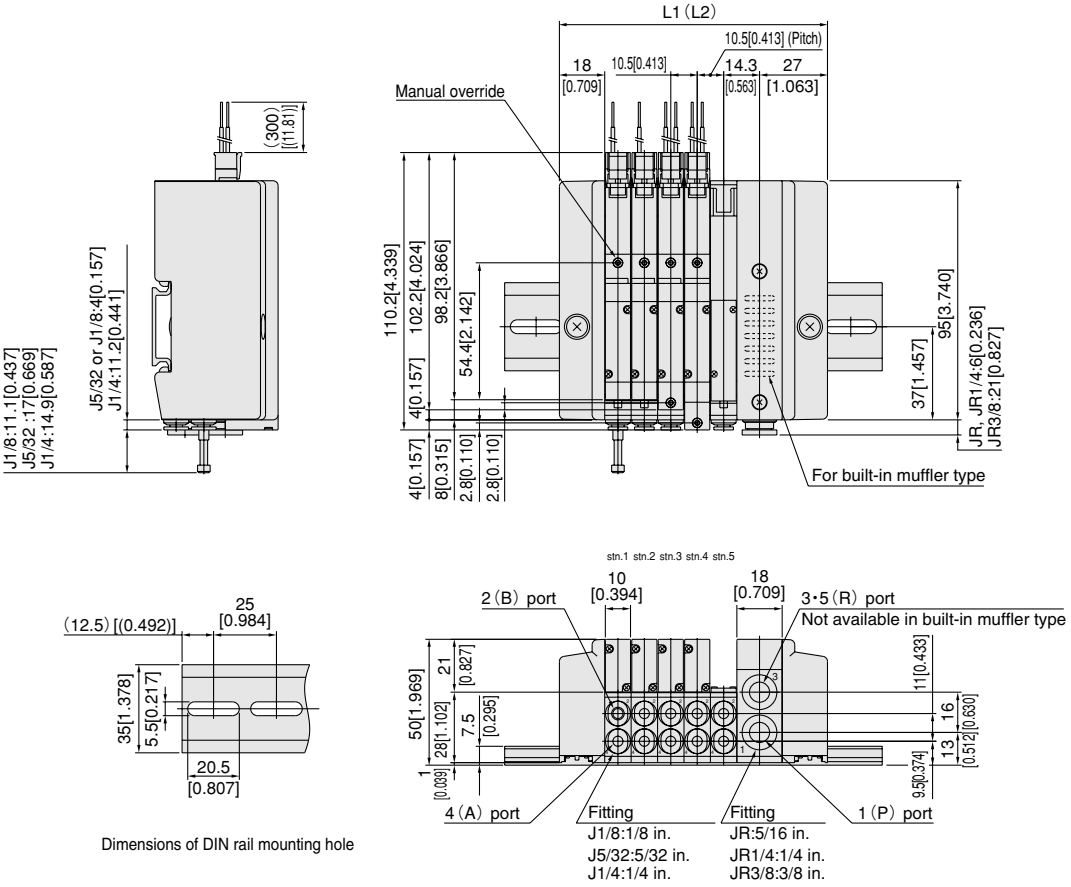
〔Mounting example〕

HJAM5A
stn.1 HJA10A1-PS-D4
stn.2 HJA10A5-PS-D4
stn.3 HJA10A6-PS-D4
stn.4 HJA10A7-PS-D4
stn.5 HJABP

Unit dimensions

Number of units	L	P
2	48.5[1.909]	30.5[1.201]
3	59.0[2.323]	41.0[1.614]
4	69.5[2.736]	51.5[2.028]
5	80.0[3.150]	62.0[2.441]
6	90.5[3.563]	72.5[2.854]
7	101.0[3.976]	83.0[3.268]
8	111.5[4.390]	93.5[3.681]
9	122.0[4.803]	104.0[4.095]
10	132.5[5.217]	114.5[4.508]
11	143.0[5.630]	125.0[4.921]
12	153.5[6.043]	135.5[5.335]
13	164.0[6.457]	146.0[5.748]
14	174.5[6.870]	156.5[6.161]
15	185.0[7.284]	167.0[6.575]
16	195.5[7.697]	177.5[6.988]
17	206.0[8.110]	188.0[7.402]
18	216.5[8.524]	198.5[7.815]
19	227.0[8.937]	209.0[8.228]
20	237.5[9.350]	219.5[8.642]

HJAM□NJ



Dimensions of DIN rail mounting hole

〔Mounting example〕

HJAM5NJ-JR
stn.1 HJA10A1-PS-J1/8-D4
stn.2 HJA10A5-PS-J1/8-D4
stn.3 HJA10A6-PS-J1/8-D4
stn.4 HJA10A7-PS-J1/8-D4
stn.5 HJABP-J1/8

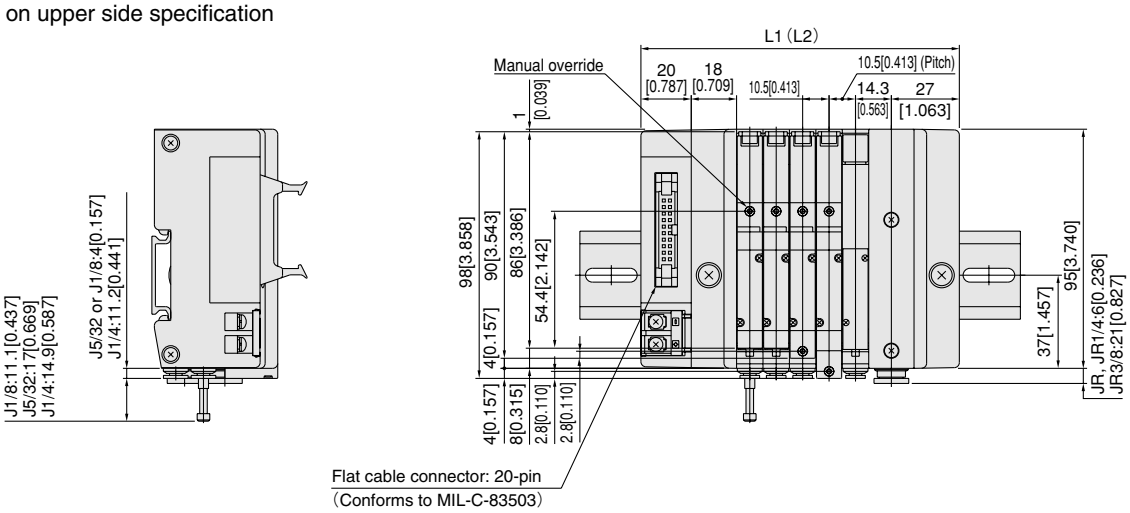
Unit dimensions

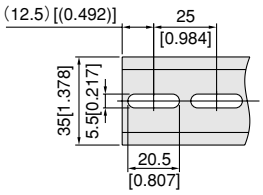
Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	75.0[2.953]	125[4.921]	93.0[3.661]	125[4.921]
3	85.5[3.366]	125[4.921]	103.5[4.075]	150[5.906]
4	96.0[3.780]	125[4.921]	114.0[4.488]	150[5.906]
5	106.5[4.193]	150[5.906]	124.5[4.902]	175[6.890]
6	117.0[4.606]	150[5.906]	135.0[5.315]	175[6.890]
7	127.5[5.020]	175[6.890]	145.5[5.728]	175[6.890]
8	138.0[5.433]	175[6.890]	156.0[6.142]	200[7.874]
9	148.5[5.847]	200[7.874]	166.5[6.555]	200[7.874]
10	159.0[6.260]	200[7.874]	177.0[6.969]	225[8.858]
11	169.5[6.673]	200[7.874]	187.5[7.382]	225[8.858]
12	180.0[7.087]	225[8.858]	198.0[7.795]	250[9.843]
13	190.5[7.500]	225[8.858]	208.5[8.209]	250[9.843]
14	201.0[7.913]	250[9.843]	219.0[8.622]	250[9.843]
15	211.5[8.327]	250[9.843]	229.5[9.035]	275[10.827]
16	222.0[8.740]	275[10.827]	240.0[9.449]	275[10.827]
17	232.5[9.154]	275[10.827]	250.5[9.862]	300[11.811]
18	243.0[9.567]	275[10.827]	261.0[10.276]	300[11.811]
19	253.5[9.980]	300[11.811]	271.5[10.689]	325[12.795]
20	264.0[10.394]	300[11.811]	282.0[11.102]	325[12.795]

Note : When using two piping blocks.

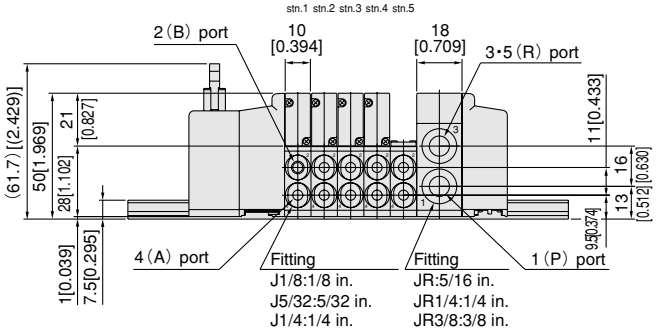
HJAM□PJ

Flat cable connector 20-pin
Connector on upper side specification





Dimensions of DIN rail mounting hole



〔Mounting example〕

HJAM5PJ-JR-F20□-D4
stn.1 HJA10A1-J1/8-D4
stn.2 HJA10A5-J1/8-D4
stn.3 HJA10A6-J1/8-D4
stn.4 HJA10A7-J1/8-D4
stn.5 HJABPP-J1/8

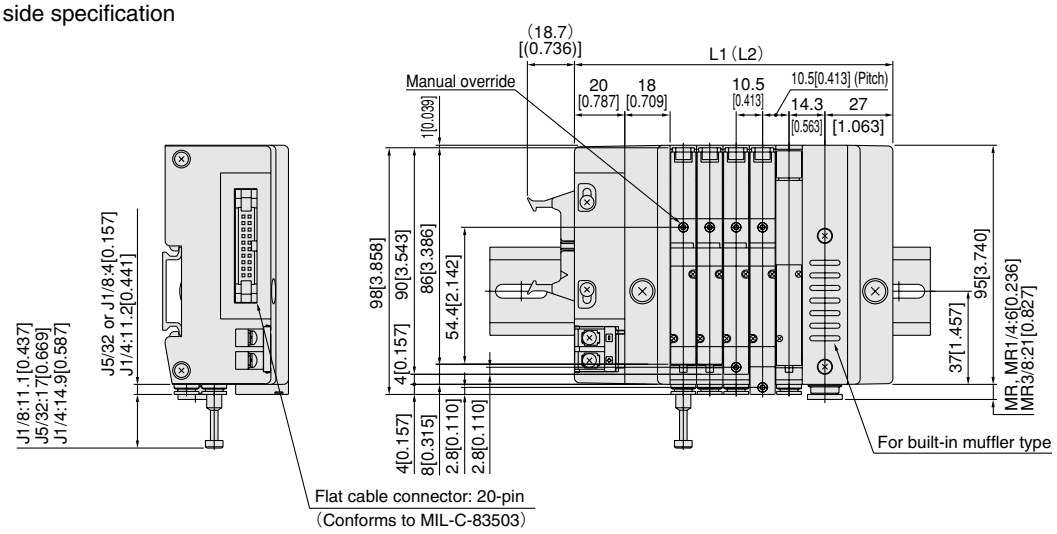
Unit dimensions

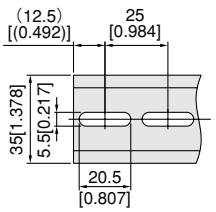
Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0[3.740]	150[5.906]	113.0[4.449]	175[6.890]
3	105.5[4.154]	175[6.890]	123.5[4.862]	175[6.890]
4	116.0[4.567]	175[6.890]	134.0[5.276]	200[7.874]
5	126.5[4.980]	175[6.890]	144.5[5.689]	200[7.874]
6	137.0[5.394]	200[7.874]	155.0[6.102]	200[7.874]
7	147.5[5.807]	200[7.874]	165.5[6.516]	225[8.858]
8	158.0[6.221]	225[8.858]	176.0[6.929]	225[8.858]
9	168.5[6.634]	225[8.858]	186.5[7.343]	250[9.843]
10	179.0[7.047]	225[8.858]	197.0[7.756]	250[9.843]
11	189.5[7.461]	250[9.843]	207.5[8.169]	275[10.827]
12	200.0[7.874]	250[9.843]	218.0[8.583]	275[10.827]
13	210.5[8.287]	275[10.827]	228.5[8.996]	275[10.827]
14	221.0[8.701]	275[10.827]	239.0[9.409]	300[11.811]
15	231.5[9.114]	300[11.811]	249.5[9.823]	300[11.811]
16	242.0[9.528]	300[11.811]	260.0[10.236]	325[12.795]

Note : When using two piping blocks.

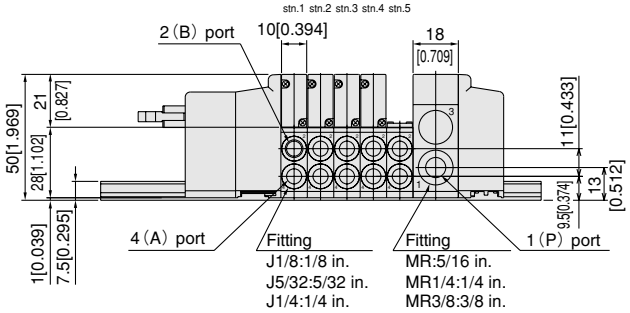
HJAM□PJ

Flat cable connector 20-pin
Connector on side specification





Dimensions of DIN rail mounting hole



〔Mounting example〕

HJAM5PJ-MR-F20□E-D4
stn.1 HJA10A1-J1/8-D4
stn.2 HJA10A5-J1/8-D4
stn.3 HJA10A6-J1/8-D4
stn.4 HJA10A7-J1/8-D4
stn.5 HJABPP-J1/8

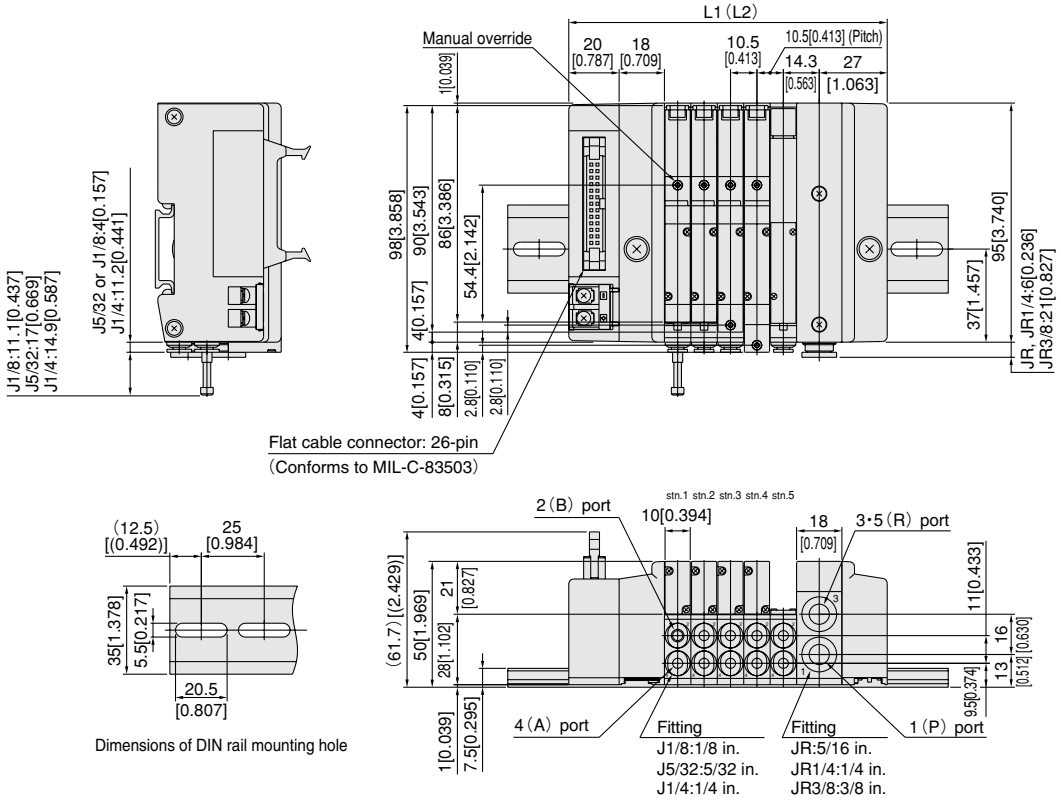
Unit dimensions

Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0[3.740]	150[5.906]	113.0[4.449]	175[6.890]
3	105.5[4.154]	175[6.890]	123.5[4.862]	175[6.890]
4	116.0[4.567]	175[6.890]	134.0[5.276]	200[7.874]
5	126.5[4.980]	175[6.890]	144.5[5.689]	200[7.874]
6	137.0[5.394]	200[7.874]	155.0[6.102]	200[7.874]
7	147.5[5.807]	200[7.874]	165.5[6.516]	225[8.858]
8	158.0[6.221]	225[8.858]	176.0[6.929]	225[8.858]
9	168.5[6.634]	225[8.858]	186.5[7.343]	250[9.843]
10	179.0[7.047]	225[8.858]	197.0[7.756]	250[9.843]
11	189.5[7.461]	250[9.843]	207.5[8.169]	275[10.827]
12	200.0[7.874]	250[9.843]	218.0[8.583]	275[10.827]
13	210.5[8.287]	275[10.827]	228.5[8.996]	275[10.827]
14	221.0[8.701]	275[10.827]	239.0[9.409]	300[11.811]
15	231.5[9.114]	300[11.811]	249.5[9.823]	300[11.811]
16	242.0[9.528]	300[11.811]	260.0[10.236]	325[12.795]

Note : When using two piping blocks.

HJAM□PJ

Flat cable connector 26-pin
Connector on upper side specification



〔Mounting example〕

HJAM5PJ-JR-F260-D4
stn.1 HJA10A1-J1/8-D4
stn.2 HJA10A5-J1/8-D4
stn.3 HJA10A6-J1/8-D4
stn.4 HJA10A7-J1/8-D4
stn.5 HJABPP-J1/8

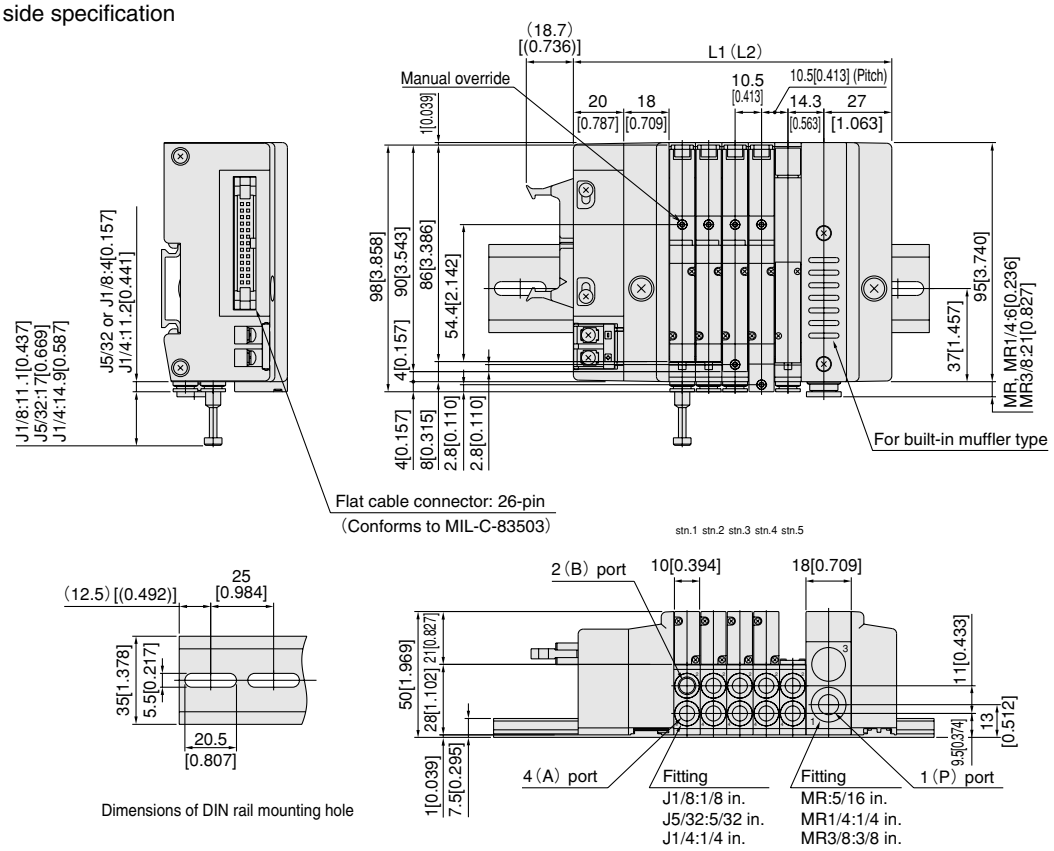
Unit dimensions

Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0[3.740]	150[5.906]	113.0[4.449]	175[6.890]
3	105.5[4.154]	175[6.890]	123.5[4.862]	175[6.890]
4	116.0[4.567]	175[6.890]	134.0[5.276]	200[7.874]
5	126.5[4.980]	175[6.890]	144.5[5.689]	200[7.874]
6	137.0[5.394]	200[7.874]	155.0[6.102]	200[7.874]
7	147.5[5.807]	200[7.874]	165.5[6.516]	225[8.858]
8	158.0[6.221]	225[8.858]	176.0[6.929]	225[8.858]
9	168.5[6.634]	225[8.858]	186.5[7.343]	250[9.843]
10	179.0[7.047]	225[8.858]	197.0[7.756]	250[9.843]
11	189.5[7.461]	250[9.843]	207.5[8.169]	275[10.827]
12	200.0[7.874]	250[9.843]	218.0[8.583]	275[10.827]
13	210.5[8.287]	275[10.827]	228.5[8.996]	275[10.827]
14	221.0[8.701]	275[10.827]	239.0[9.409]	300[11.811]
15	231.5[9.114]	300[11.811]	249.5[9.823]	300[11.811]
16	242.0[9.528]	300[11.811]	260.0[10.236]	325[12.795]
17	252.5[9.941]	300[11.811]	270.5[10.650]	325[12.795]
18	263.0[10.354]	325[12.795]	281.0[11.063]	350[13.780]
19	273.5[10.768]	325[12.795]	291.5[11.476]	350[13.780]
20	284.0[11.181]	350[13.780]	302.0[11.890]	350[13.780]

Note : When using two piping blocks.

HJAM□PJ

Flat cable connector 26-pin
Connector on side specification



Dimensions of DIN rail mounting hole

〔Mounting example〕

HJAM5PJ-MR-F260E-D4
stn.1 HJA10A1-J1/8-D4
stn.2 HJA10A5-J1/8-D4
stn.3 HJA10A6-J1/8-D4
stn.4 HJA10A7-J1/8-D4
stn.5 HJABPP-J1/8

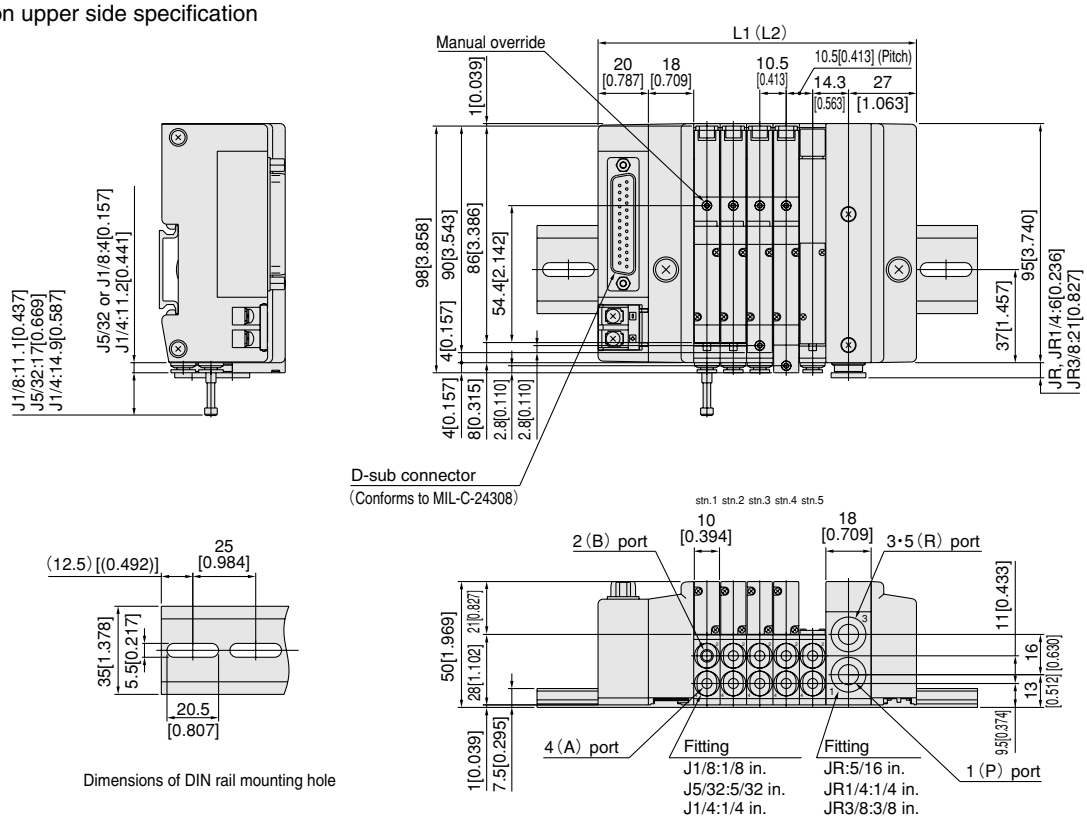
Unit dimensions

Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0[3.740]	150[5.906]	113.0[4.449]	175[6.890]
3	105.5[4.154]	175[6.890]	123.5[4.862]	175[6.890]
4	116.0[4.567]	175[6.890]	134.0[5.276]	200[7.874]
5	126.5[4.980]	175[6.890]	144.5[5.689]	200[7.874]
6	137.0[5.394]	200[7.874]	155.0[6.102]	200[7.874]
7	147.5[5.807]	200[7.874]	165.5[6.516]	225[8.858]
8	158.0[6.221]	225[8.858]	176.0[6.929]	225[8.858]
9	168.5[6.634]	225[8.858]	186.5[7.343]	250[9.843]
10	179.0[7.047]	225[8.858]	197.0[7.756]	250[9.843]
11	189.5[7.461]	250[9.843]	207.5[8.169]	275[10.827]
12	200.0[7.874]	250[9.843]	218.0[8.583]	275[10.827]
13	210.5[8.287]	275[10.827]	228.5[8.996]	275[10.827]
14	221.0[8.701]	275[10.827]	239.0[9.409]	300[11.811]
15	231.5[9.114]	300[11.811]	249.5[9.823]	300[11.811]
16	242.0[9.528]	300[11.811]	260.0[10.236]	325[12.795]
17	252.5[9.941]	300[11.811]	270.5[10.650]	325[12.795]
18	263.0[10.354]	325[12.795]	281.0[11.063]	350[13.780]
19	273.5[10.768]	325[12.795]	291.5[11.476]	350[13.780]
20	284.0[11.181]	350[13.780]	302.0[11.890]	350[13.780]

Note : When using two piping blocks.

HJAM□PJ

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



Dimensions of DIN rail mounting hole

〔Mounting example〕
HJAM5PJ-JR-D25□-D4
stn.1 HJA10A1-J1/8-D4
stn.2 HJA10A5-J1/8-D4
stn.3 HJA10A6-J1/8-D4
stn.4 HJA10A7-J1/8-D4
stn.5 HJABPP-J1/8

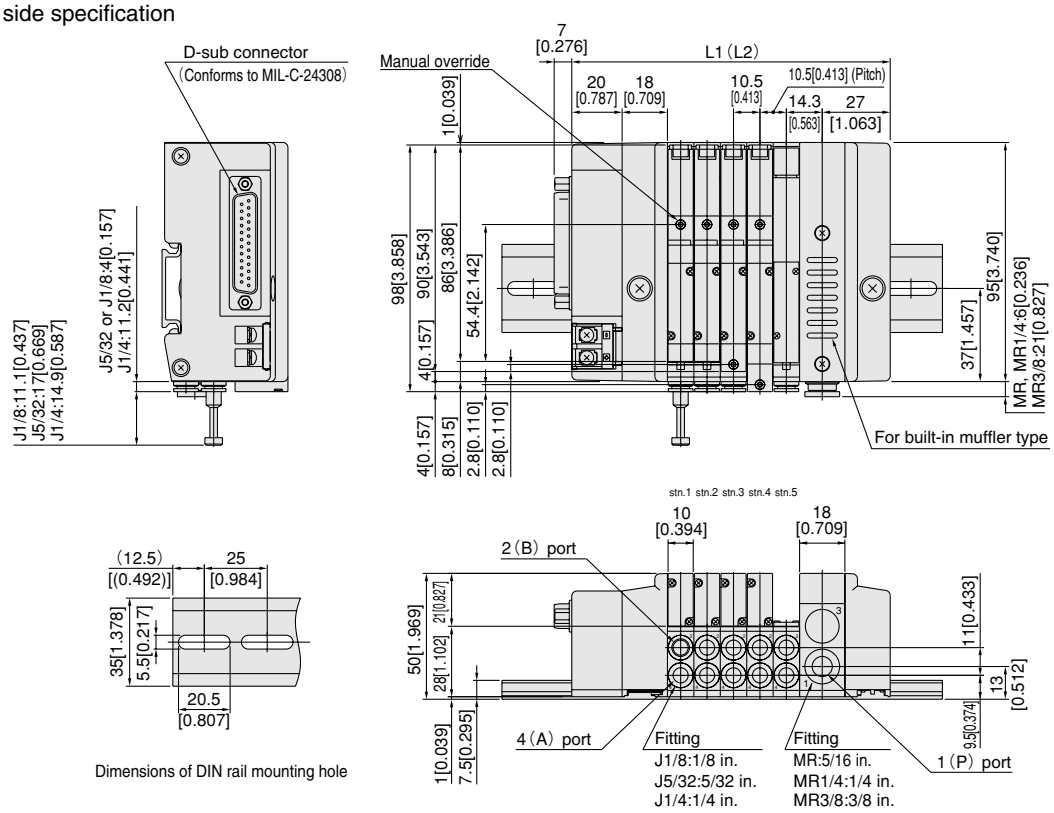
Unit dimensions

Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0[3.740]	150[5.906]	113.0[4.449]	175[6.890]
3	105.5[4.154]	175[6.890]	123.5[4.862]	175[6.890]
4	116.0[4.567]	175[6.890]	134.0[5.276]	200[7.874]
5	126.5[4.980]	175[6.890]	144.5[5.689]	200[7.874]
6	137.0[5.394]	200[7.874]	155.0[6.102]	200[7.874]
7	147.5[5.807]	200[7.874]	165.5[6.516]	225[8.858]
8	158.0[6.221]	225[8.858]	176.0[6.929]	225[8.858]
9	168.5[6.634]	225[8.858]	186.5[7.343]	250[9.843]
10	179.0[7.047]	225[8.858]	197.0[7.756]	250[9.843]
11	189.5[7.461]	250[9.843]	207.5[8.169]	275[10.827]
12	200.0[7.874]	250[9.843]	218.0[8.583]	275[10.827]
13	210.5[8.287]	275[10.827]	228.5[8.996]	275[10.827]
14	221.0[8.701]	275[10.827]	239.0[9.409]	300[11.811]
15	231.5[9.114]	300[11.811]	249.5[9.823]	300[11.811]
16	242.0[9.528]	300[11.811]	260.0[10.236]	325[12.795]
17	252.5[9.941]	300[11.811]	270.5[10.650]	325[12.795]
18	263.0[10.354]	325[12.795]	281.0[11.063]	350[13.780]
19	273.5[10.768]	325[12.795]	291.5[11.476]	350[13.780]
20	284.0[11.181]	350[13.780]	302.0[11.890]	350[13.780]

Note : When using two piping blocks.

HJAM□PJ

D-sub connector 25-pin
Connector on side specification



Dimensions of DIN rail mounting hole

〔Mounting example〕
HJAM5PJ-MR-D25□E-D4
stn.1 HJA10A1-J1/8-D4
stn.2 HJA10A5-J1/8-D4
stn.3 HJA10A6-J1/8-D4
stn.4 HJA10A7-J1/8-D4
stn.5 HJABPP-J1/8

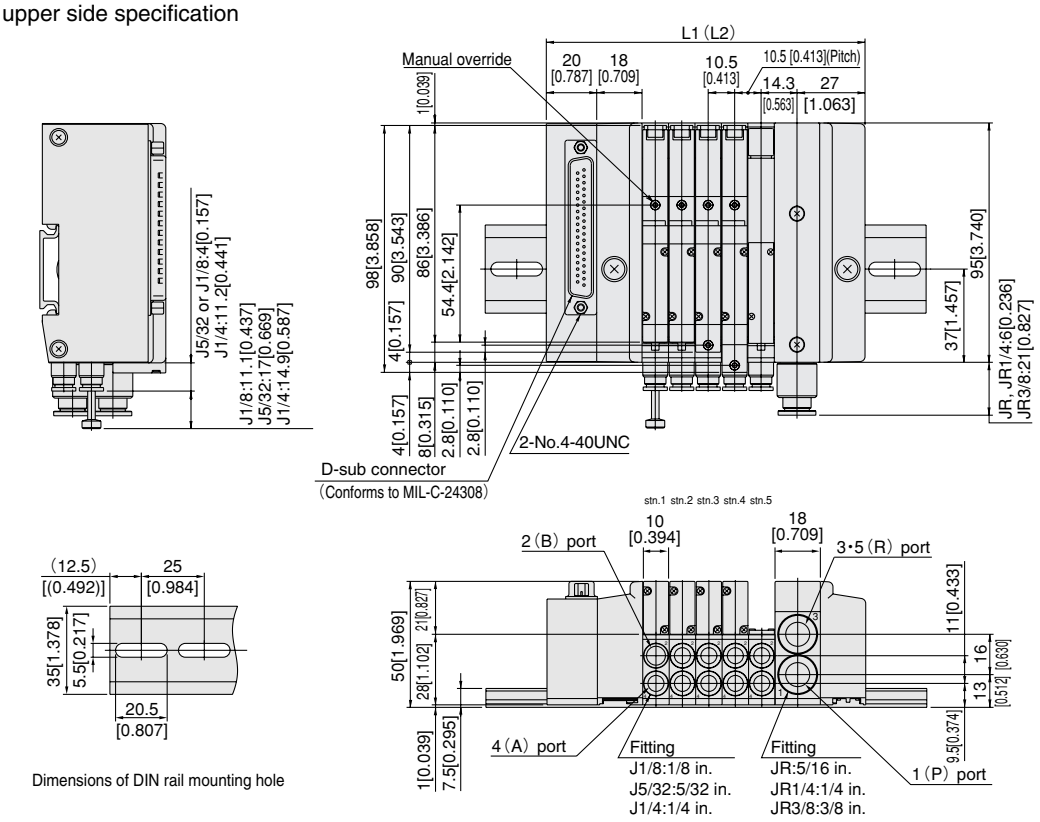
Unit dimensions

Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0[3.740]	150[5.906]	113.0[4.449]	175[6.890]
3	105.5[4.154]	175[6.890]	123.5[4.862]	175[6.890]
4	116.0[4.567]	175[6.890]	134.0[5.276]	200[7.874]
5	126.5[4.980]	175[6.890]	144.5[5.689]	200[7.874]
6	137.0[5.394]	200[7.874]	155.0[6.102]	200[7.874]
7	147.5[5.807]	200[7.874]	165.5[6.516]	225[8.858]
8	158.0[6.221]	225[8.858]	176.0[6.929]	225[8.858]
9	168.5[6.634]	225[8.858]	186.5[7.343]	250[9.843]
10	179.0[7.047]	225[8.858]	197.0[7.756]	250[9.843]
11	189.5[7.461]	250[9.843]	207.5[8.169]	275[10.827]
12	200.0[7.874]	250[9.843]	218.0[8.583]	275[10.827]
13	210.5[8.287]	275[10.827]	228.5[8.996]	275[10.827]
14	221.0[8.701]	275[10.827]	239.0[9.409]	300[11.811]
15	231.5[9.114]	300[11.811]	249.5[9.823]	300[11.811]
16	242.0[9.528]	300[11.811]	260.0[10.236]	325[12.795]
17	252.5[9.941]	300[11.811]	270.5[10.650]	325[12.795]
18	263.0[10.354]	325[12.795]	281.0[11.063]	350[13.780]
19	273.5[10.768]	325[12.795]	291.5[11.476]	350[13.780]
20	284.0[11.181]	350[13.780]	302.0[11.890]	350[13.780]

Note : When using two piping blocks.

HJAM□PJ

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



Dimensions of DIN rail mounting hole

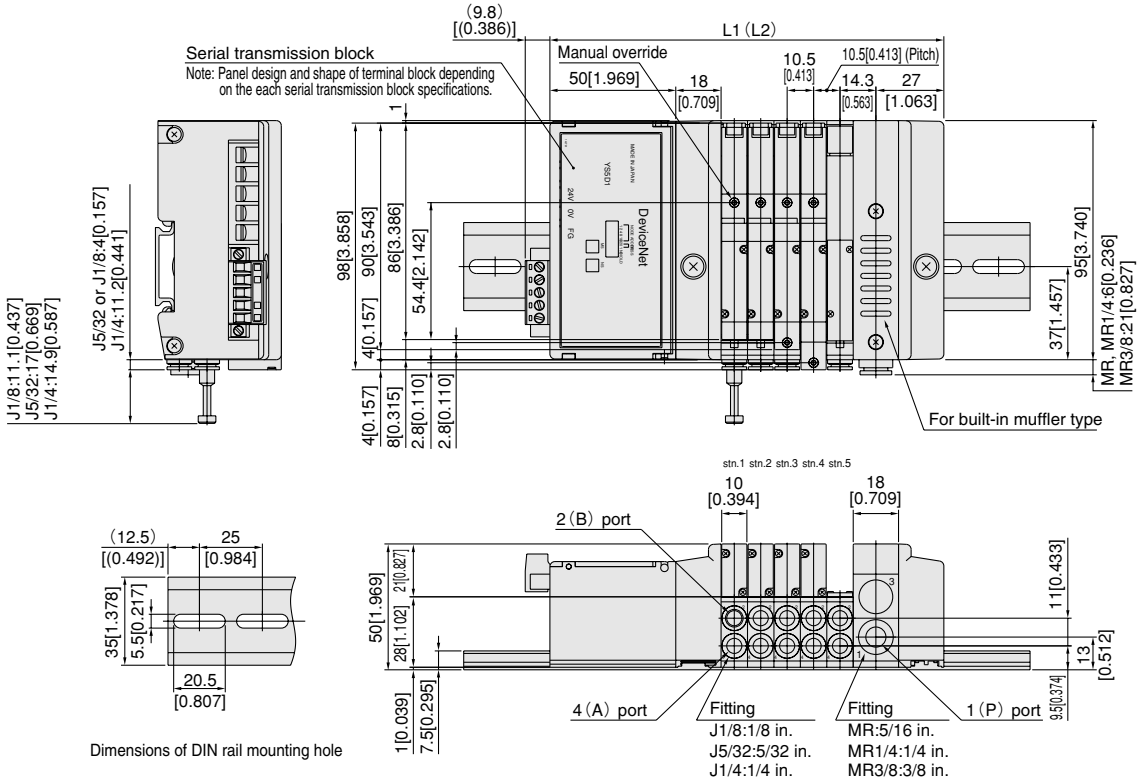
〔Mounting example〕
HJAM5PJ-JR3/8-D370U-D4
stn.1 HJA10A1-J1/4-D4
stn.2 HJA10A5-J1/4-D4
stn.3 HJA10A6-J1/4-D4
stn.4 HJA10A7-J1/4-D4
stn.5 HJABPP-J1/4

Unit dimensions

Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	95.0[3.740]	150[5.906]	113.0[4.449]	175[6.890]
3	105.5[4.154]	175[6.890]	123.5[4.862]	175[6.890]
4	116.0[4.567]	175[6.890]	134.0[5.276]	200[7.874]
5	126.5[4.980]	175[6.890]	144.5[5.689]	200[7.874]
6	137.0[5.394]	200[7.874]	155.0[6.102]	200[7.874]
7	147.5[5.807]	200[7.874]	165.5[6.516]	225[8.858]
8	158.0[6.221]	225[8.858]	176.0[6.929]	225[8.858]
9	168.5[6.634]	225[8.858]	186.5[7.343]	250[9.843]
10	179.0[7.047]	225[8.858]	197.0[7.756]	250[9.843]
11	189.5[7.461]	250[9.843]	207.5[8.169]	275[10.827]
12	200.0[7.874]	250[9.843]	218.0[8.583]	275[10.827]
13	210.5[8.287]	275[10.827]	228.5[8.996]	275[10.827]
14	221.0[8.701]	275[10.827]	239.0[9.409]	300[11.811]
15	231.5[9.114]	300[11.811]	249.5[9.823]	300[11.811]
16	242.0[9.528]	300[11.811]	260.0[10.236]	325[12.795]
17	252.5[9.941]	300[11.811]	270.5[10.650]	325[12.795]
18	263.0[10.354]	325[12.795]	281.0[11.063]	350[13.780]
19	273.5[10.768]	325[12.795]	291.5[11.476]	350[13.780]
20	284.0[11.181]	350[13.780]	302.0[11.890]	350[13.780]

Note : When using two piping blocks.

HJAM□SJ



Dimensions of DIN rail mounting hole

〔Mounting example〕

HJAM5SJ-MR-D1
stn.1 HJA10A1-J1/8-D4
stn.2 HJA10A5-J1/8-D4
stn.3 HJA10A6-J1/8-D4
stn.4 HJA10A7-J1/8-D4
stn.5 HJABPP-J1/8

Unit dimensions

Number of units	L1	DIN rail length	L2[Note]	DIN rail length[Note]
2	125.0[4.921]	175[6.890]	143.0[5.630]	200[7.874]
3	135.5[5.335]	200[7.874]	153.5[6.043]	200[7.874]
4	146.0[5.748]	200[7.874]	164.0[6.457]	225[8.858]
5	156.5[6.161]	225[8.858]	174.5[6.870]	225[8.858]
6	167.0[6.575]	225[8.858]	185.0[7.284]	250[9.843]
7	177.5[6.988]	225[8.858]	195.5[7.697]	250[9.843]
8	188.0[7.402]	250[9.843]	206.0[8.110]	275[10.827]
9	198.5[7.815]	250[9.843]	216.5[8.524]	275[10.827]
10	209.0[8.228]	275[10.827]	227.0[8.937]	275[10.827]
11	219.5[8.642]	275[10.827]	237.5[9.350]	300[11.811]
12	230.0[9.055]	275[10.827]	248.0[9.764]	300[11.811]
13	240.5[9.469]	300[11.811]	258.5[10.177]	325[12.795]
14	251.0[9.882]	300[11.811]	269.0[10.591]	325[12.795]
15	261.5[10.295]	325[12.795]	279.5[11.004]	325[12.795]
16	272.0[10.709]	325[12.795]	290.0[11.417]	350[13.780]

Note : When using two piping blocks.