Reference for Maintenance (Replacement Procedure)

IITV00 Manifold type

SMC Corporation

This procedure describes assembly procedure for IITV00 manifold.

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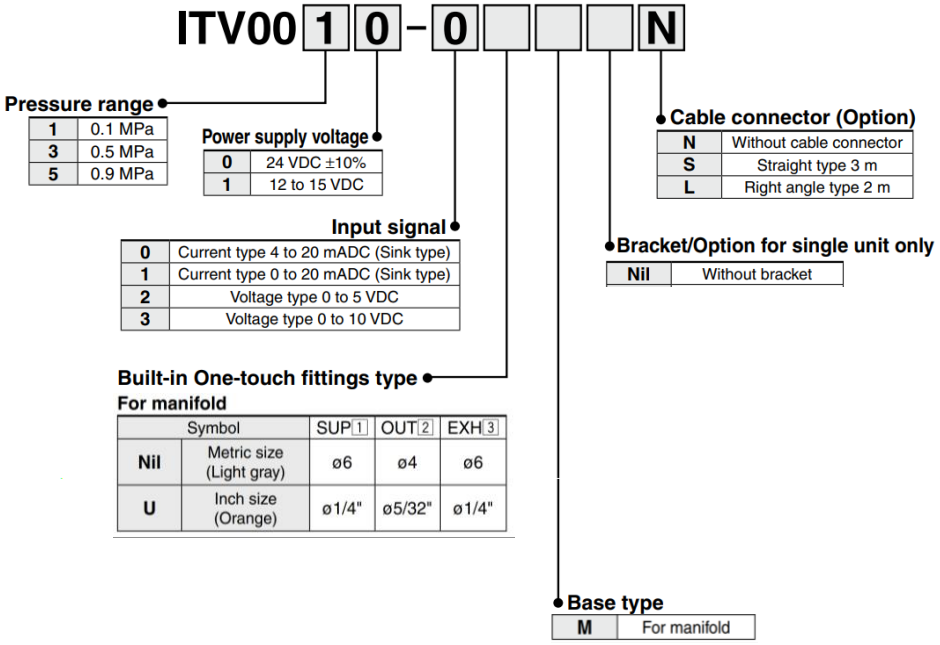
1.Object model

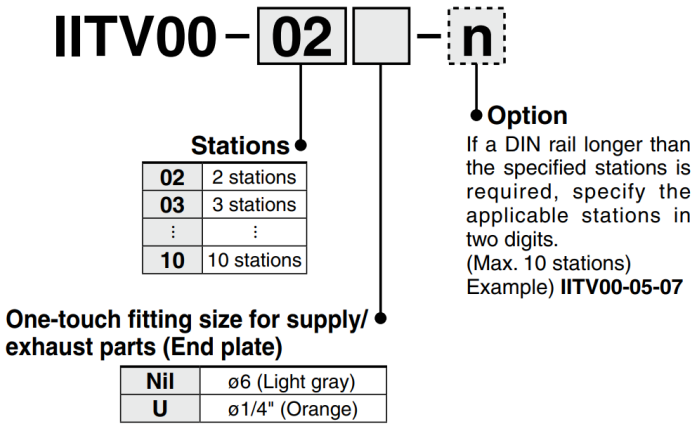
IITV00-※※ series

2.How to order

1) Manifold single type



2) Manifold type



* A DIN rail with the length specified by the number of stations is attached to the manifold. For dimensions of the DIN rail, refer to the external dimensions.

3.Product and standard part used

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Please see table 1 for components consisting ITV00** Series for manifold.

Table 1. Product and standard part used

No.	Product and part number	Part name	QTY	Remarks
1	ITV00※※－※※M※	Electro-pneumatic regulator	n	Refer to the How to order
2	P39800024-1	End block (A) Ass'y	1	ITV00**-*M*
	P39800024-2			ITV00**-*UM*
3	P39800025-1	End block (B) Ass'y	1	ITV00**-*M*
	P39800025-2			ITV00**-*UM*
4	AXT100-DR-n	DIN Rail	1	Refer to Table 2
5	VVQ1000-87A-50	Bushing Ass'y	※1	

*Note 1: The number of bushing Ass'y is 2 + 2 * n.

(If n = 5, the quantity is 12. If n = 10, the quantity is 22.)

*Note 2: All parts listed in Table 1 are assembled at the time of shipment of the IITV00-**.

Table 2. DIN rail part number

No.	Model	DIN rail
1	IITV00-02※	AXT100-DR-8
2	IITV00-03※	AXT100-DR-9
3	IITV00-04※	AXT100-DR-11
4	IITV00-05※	AXT100-DR-12
5	IITV00-06※	AXT100-DR-13
6	IITV00-07※	AXT100-DR-14
7	IITV00-08※	AXT100-DR-15
8	IITV00-09※	AXT100-DR-17
9	IITV00-10※	AXT100-DR-18
10	IITV00-※※-03	AXT100-DR-9
11	IITV00-※※-04	AXT100-DR-11
12	IITV00-※※-05	AXT100-DR-12
13	IITV00-※※-06	AXT100-DR-13
14	IITV00-※※-07	AXT100-DR-14
15	IITV00-※※-08	AXT100-DR-15
16	IITV00-※※-09	AXT100-DR-17
17	IITV00-※※-10	AXT100-DR-18

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4.Manifold Assembly procedure

1) Insert the bushing Ass'y into the right side of the ITV00 (when the OUT port is facing forward) and into the hole of the end block (B) Ass'y.

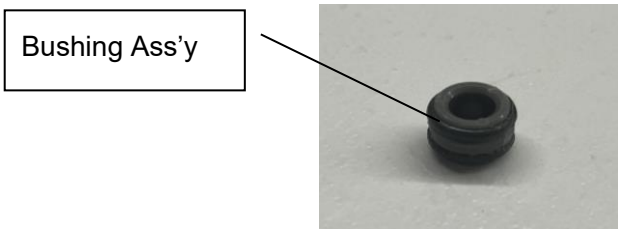

Figure 1. Bushing Ass'y

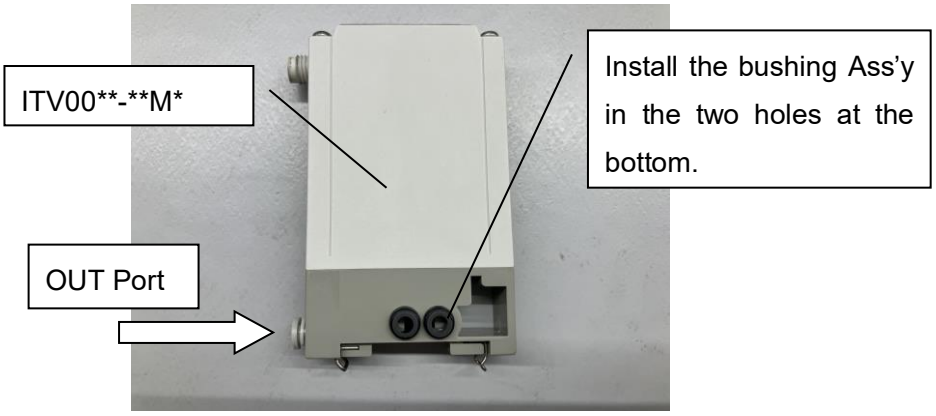

Figure 2. ITV00**-*M (side view)

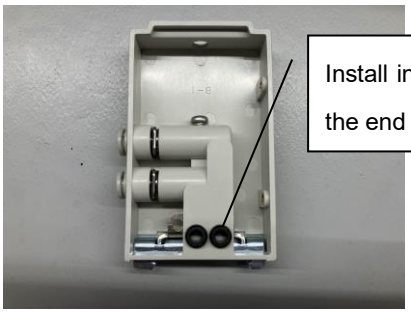

Figure 3. End block (B) Ass'y (side view)

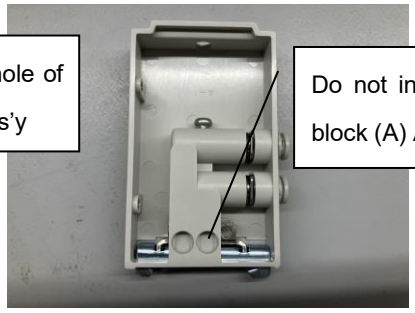

Figure 4. End block (A) Ass'y (side view)

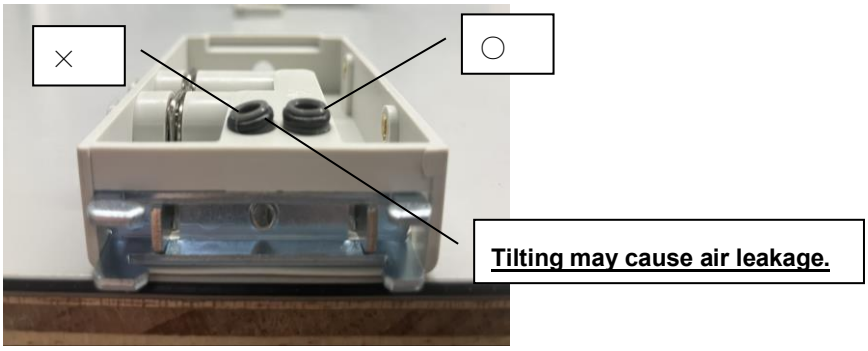

Figure 5. Bushing Ass'y installed condition

Note: The bushing assembly used for the manifold unit and for the end block assembly is a common part. The photograph shows the end block Ass'y.

2) Install the end block (A) Ass'y on the DIN rail and secure it with screws.

(Install it at a right angle using a V-block or similar tool.)

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Screw size: M4x45

Tool: Phillips screwdriver

Tightening torque: 0.7 N·m (+0.1 / 0)

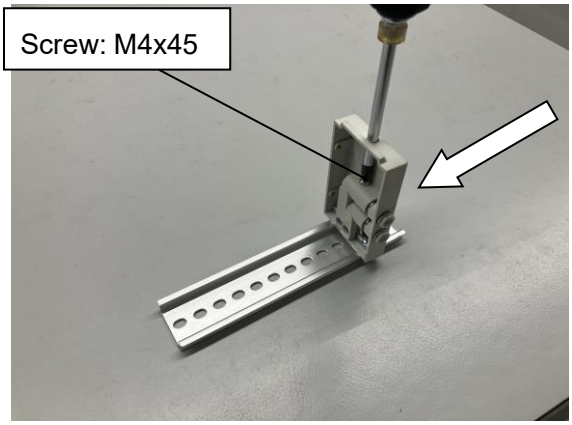

Figure 6. End Block (A) Ass'y Installation Diagram

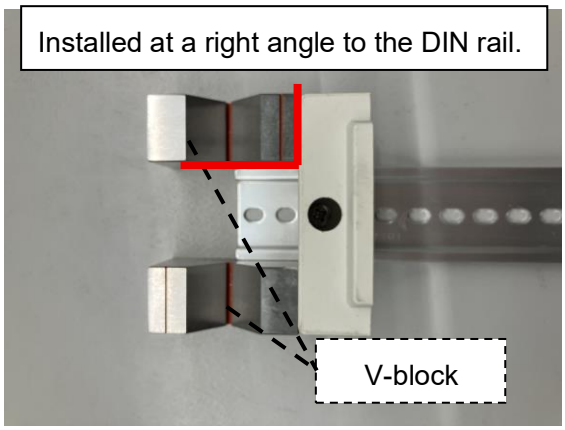

Figure 7. End Block (A) Ass'y Installation Diagram Top View

3) Install one ITV00**-**M* at each position in 2). <u>At this time, install them parallel so that the bushing Ass'y is not tilted.</u>

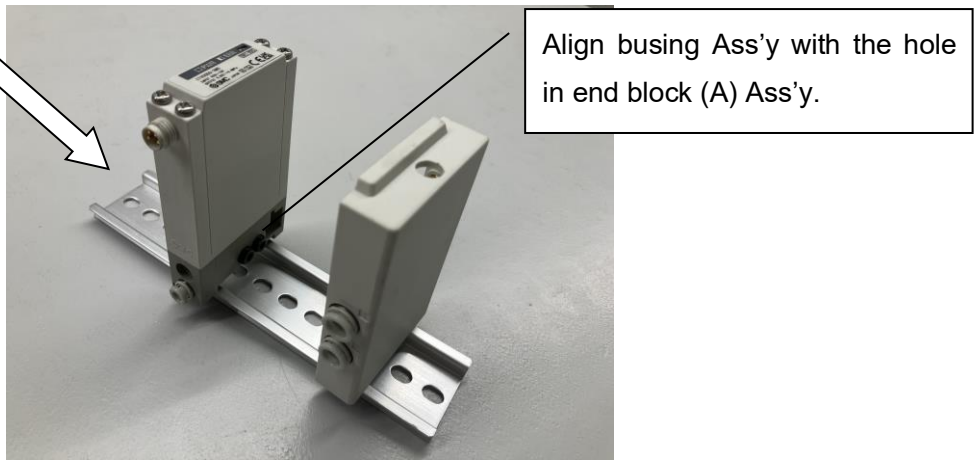

Figure 8. ITV00**-**M* Installation Diagram Unit 1

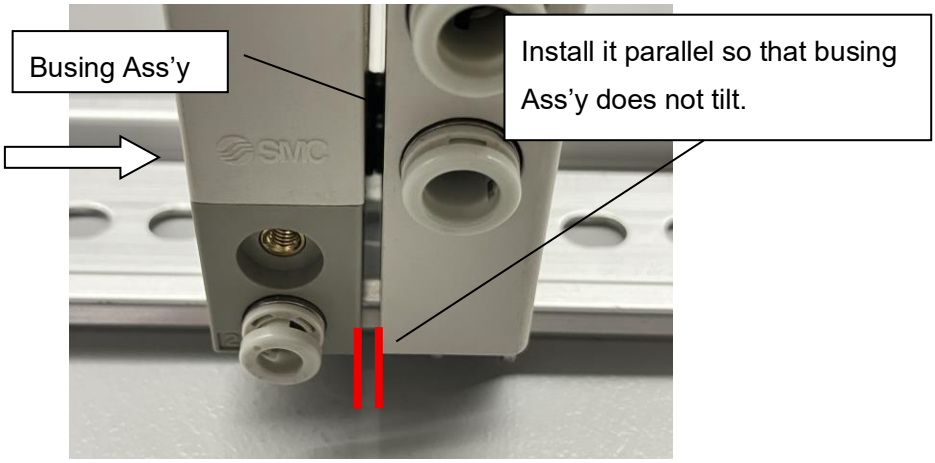

Figure 9. ITV00**-**M* Installation Diagram Detail View

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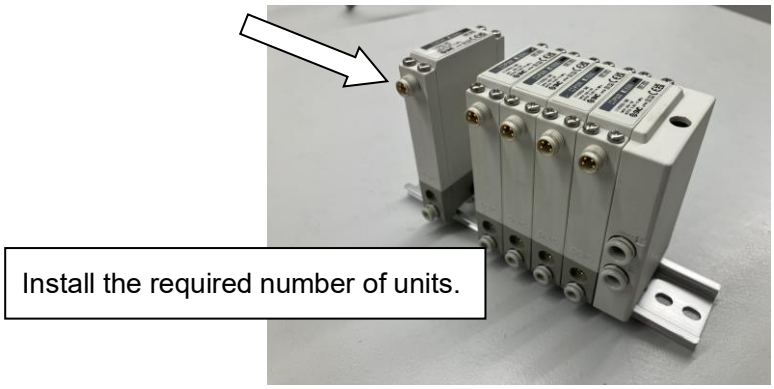

Figure 10. ITV00**-**M* Installation Diagram 5 units.

4) Install end block (B) Ass'y and secure it with screws.

As with the installation of ITV00**-M, install it parallel so that busing Ass'y does not tilt.

Screw size: M4x45

Tool: Phillips screwdriver

Tightening torque: 0.7 N·m (+0.1 / 0)

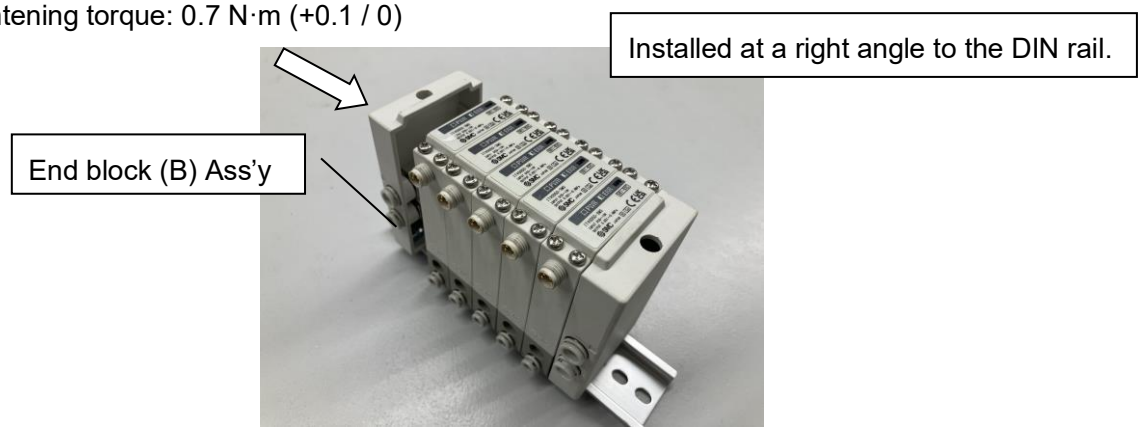

Figure 11. End block (B) Ass'y Installation Diagram

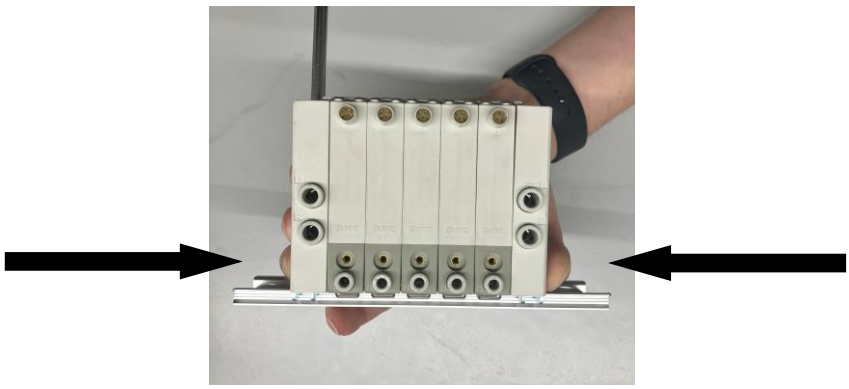

Figure 12. Screw tightening condition

The flow path is located at the lower section. Tightening the screws while holding down the lower section helps to reduce the likelihood of leakage.

5.Inspection procedure

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Check that the leakage rate at the joint surface between the manifold alone and the end block satisfies the acceptance criteria shown in Table 4 when the supply pressure specified in Table 3 is applied from the SUP port (see Fig. 13).

If the acceptance criteria are not satisfied, reassemble the unit.

Note that failure to perform the above inspection before use may result in nonconformities such as air leakage.

Table 3. Inspection supply pressure

Product No.	Supply Pressure
ITV001※	0.2
ITV003※	0.6
ITV005※	1
ITV009※	0.2 note3

Table 4. Acceptance criteria

Stations	Acceptance criteria
1～5	0.01L/min (ANR) or less
6～10	0.02L/min (ANR) or less

*Note 3: Please also inspect the vacuum type under positive pressure.

R ：Regulator

Q ：Flow meter

F ：Filter

It is acceptable to connect the supply pressure to the U side and install a plug on the D side.

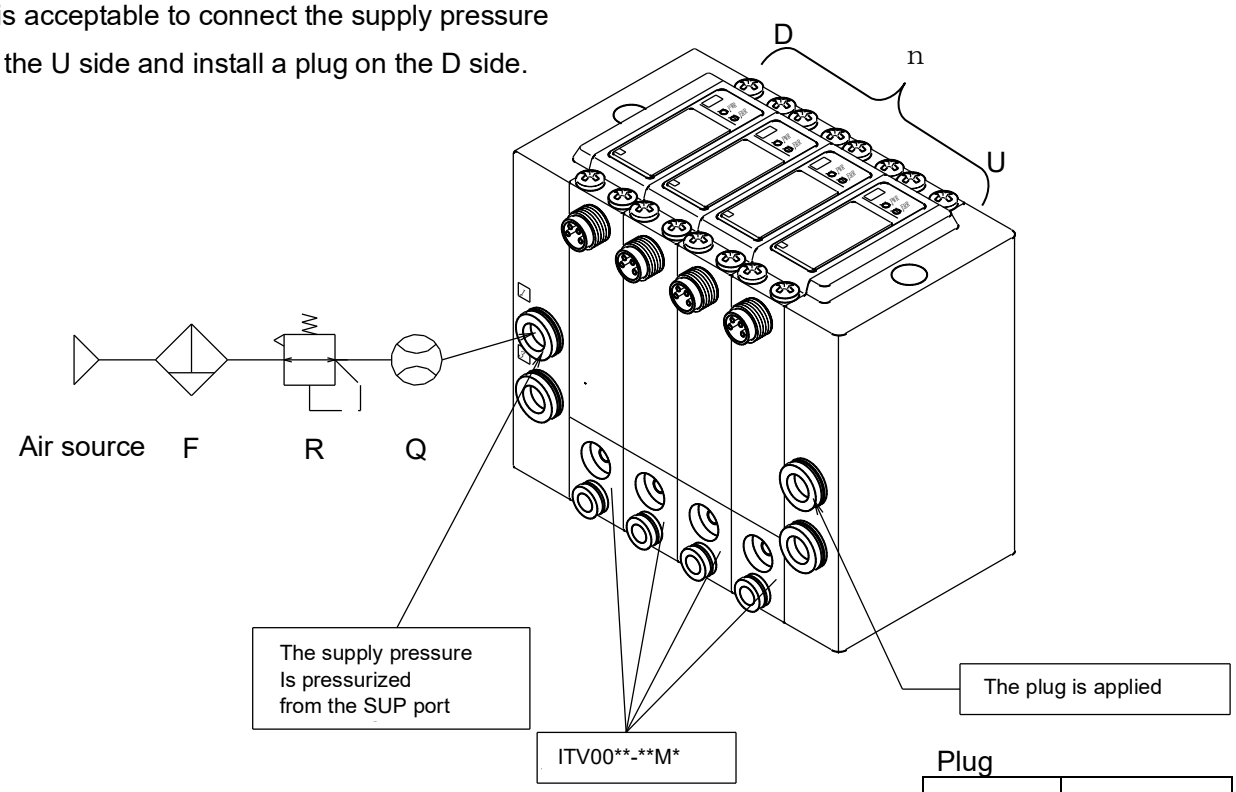

Figure 13: Piping Diagram
(Inspection Procedure)

Plug

Size	Part No.
Metric	KQ2P-06
Inch	KQ2P-07