

Series 10-AS

Speed Controller with One-touch Fitting (In-line type)

Series

Series	Applicable tube O.D.						
	Metric size						
	2	3.2	4	6	8	10	12
10-AS1002F	⊙	⊙	⊙	⊙			
10-AS2002F			⊙	⊙			
10-AS2052F				⊙	⊙		
10-AS3002F				⊙	⊙	⊙	⊙
10-AS4002F						⊙	⊙

Specifications

Fluid	Air
Proof pressure	1.5 MPa (1.05 MPa ^{Note 1)})
Max. operating pressure	1 MPa (0.7 MPa ^{Note 1)})
Min. operating pressure	0.1 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Applicable tube material	Polyurethane ^{Note 2)}
Option	Round lock nut
Grease	Fluorine grease
Cleanliness class (ISO class)	Class 5

Note 1) In case of 10-AS1002F-02

Note 2) The maximum operating pressure for polyurethane is 0.8 MPa (at 20°C).
(Refer to the **WEB catalog**.)

Note 3) Brass parts are all electroless nickel plated.

Flow Rate and Sonic Conductance

Tubing O.D.	Model	10-AS1002F						10-AS2002F		10-AS2052F		10-AS3002F		10-AS4002F	
		Metric size		⌀2	⌀3.2, ⌀4, ⌀6	⌀4	⌀6	⌀6	⌀8	⌀6	⌀8	⌀10, ⌀12	⌀10	⌀12	
Controlled flow	Flow rate L/min (ANR)	20	100	130	230	290	460	390	660	920	920	1390			
Free flow	Sonic conductance dm ³ /(s·bar)	0.06	0.28	0.36	0.64	0.81	1.3	1.1	1.8	2.6	2.6	3.9			
Critical pressure ratio	Controlled flow	0.2													
	Free flow	0.25													

Note) Flow rate values are measured at 0.5 MPa and 20°C.

How to Order

10-AS 400 2F -12 -

Clean series

Body size

100	M3, M5 standard
200	1/8 standard
205	1/4 standard
300	3/8 standard
400	1/2 standard

Applicable tube O.D. Metric size


02	⌀2
23	⌀3.2*
04	⌀4
06	⌀6
08	⌀8
10	⌀10
12	⌀12

Lock nut option

Nil	Hexagon lock nut
-J	Round lock nut

With One-touch fittings

* Use ⌀1/8" tube.

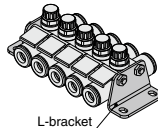


RoHS

Options

L-bracket

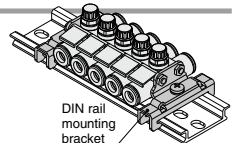
Part no.	Applicable series
AS-12L	10-AS1002F-02
AS-10L	10-AS1002F
AS-20L	10-AS2002F
AS-25L	10-AS2052F
AS-30L	10-AS3002F
AS-40L	10-AS4002F



L-bracket

DIN rail mounting bracket

Part no.	Applicable series
AS-10D	10-AS1002F
AS-20D	10-AS2002F
AS-25D	10-AS2052F
AS-30D	10-AS3002F
AS-40D	10-AS4002F



DIN rail mounting bracket

* Bracket for 10-AS1002F-02 is not available.

* Prepare DIN rail by user.

Part no. list of threaded stud kit for manifold

Model	4 stations	6 stations	8 stations	10 stations
Metric size				
10-AS1002F-02	AS-31B	AS-32B	AS-33B	AS-34B
10-AS1002F-23		AS-33B	AS-34B	AS-36B
10-AS1002F-04	AS-32B		AS-35B	
10-AS1002F-06		AS-34B	AS-36B	
10-AS2002F-04			AS-35B	AS-37B
10-AS2002F-06	AS-32B	AS-34B	AS-36B	
10-AS2052F-06				
10-AS2052F-08	AS-41B	AS-42B	AS-44B	AS-45B
10-AS3002F-06				
10-AS3002F-08	AS-42B	AS-44B	AS-45B	AS-47B
10-AS3002F-10			AS-46B	
10-AS3002F-12				
10-AS4002F-10				
10-AS4002F-12	AS-43B	AS-45B	AS-47B	AS-48B

Details of threaded stud kit for manifold

Part no.	Threaded stud kit		Accessories			
	Length	pcs.	Hexagon nut	Pcs.	Flat washer	Pcs.
AS-31B	38	2	M3	4	M3	4
AS-32B	62	2				
AS-33B	72	2				
AS-34B	90	2				
AS-35B	104	2				
AS-36B	114	2				
AS-37B	135	2				
AS-38B	140	2				
AS-41B	78	2				
AS-42B	111	2				
AS-43B	119	2				
AS-44B	147	2				
AS-45B	179	2				
AS-46B	191	2				
AS-47B	236	2				
AS-48B	277	2				

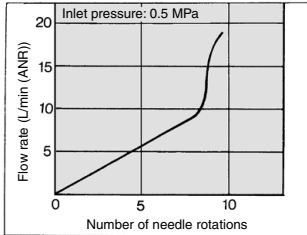
* Precautions when options are ordered

Threaded studs for manifold are not included when L-bracket and DIN rail mounting bracket are ordered. Please order them according to the number of stations.

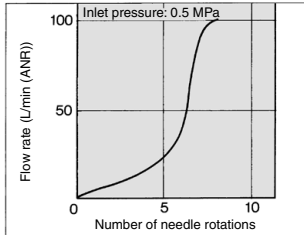
Ex.) 10-AS2002F-04	When connecting 4 pcs. and mounting L-brackets on both sides	
• Speed controller	10-AS2002F-044 pcs.
• L-bracket	AS-20L2 pcs.
• Threaded stud kit for manifold	AS-32B1 pc.

Needle Valve/Flow Rate Characteristics

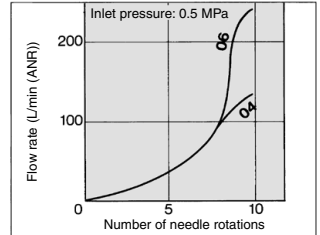
10-AS1002F-02



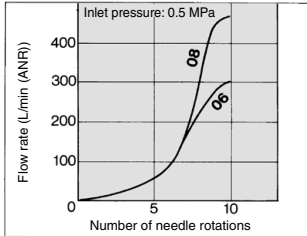
10-AS1002F



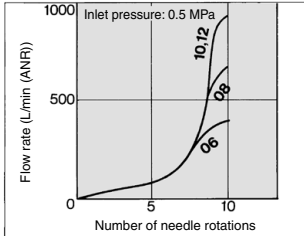
10-AS2002F



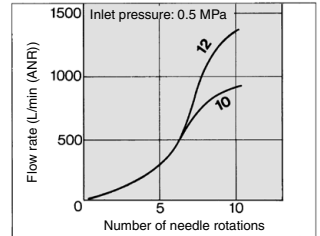
10-AS2052F



10-AS3002F

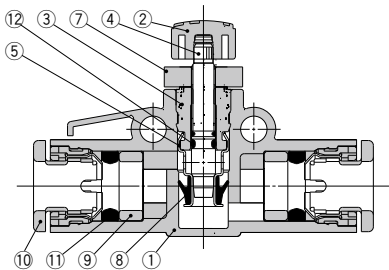


10-AS4002F

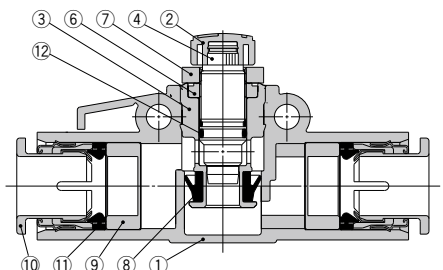


Construction

10-AS1002F, AS2002F, AS2052F



10-AS1002F-02, AS3002F, AS4002F



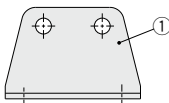
Component Parts

No.	Description	Material	Note
1	Body A	PBT	
2	Handle	PBT	
3	Body B	Brass	Electroless nickel plated
4	Needle	Brass	Electroless nickel plated
5	Seat ring	Brass	Electroless nickel plated
6	Needle guide	Brass	Electroless nickel plated

Note) AS2052F, AS3002F, AS4002F are made of PBT.

No.	Description	Material	Note
7	Lock nut	Steel wire	Zinc chromated
8	U-seal	HNBR	
9	Spacer	POM ^(Note)	
10	Cassette	—	
11	Seal	NBR	
12	O-ring	NBR	

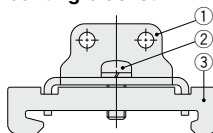
L-bracket



Component Part

No.	Description	Material
1	Bracket	Steel strip

DIN rail mounting bracket



Component Parts

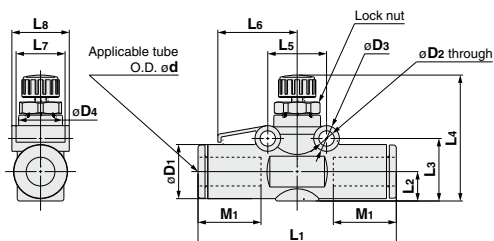
No.	Description	Material
1	Bracket	Steel strip
2	Cross recessed round head screw	Steel wire
3	Clasp	Steel strip

⚠ Caution

Be sure to read this before handling. Refer to page 1382 for Safety Instructions and pages 1305 to 1308 for Flow Control Equipment Precautions.

Directional Control Valves
 Air Cylinders
 Rotary Actuators
 Air Grippers
 Air Preparation Equipment
 Modular F. R.
 Pressure Control Equipment
 Fittings & Tubing
 Flow Control Equipment
 Pressure Switches/ Pressure Sensors

Dimensions



Metric Size

Model	Applicable tube O.D. ød	D1	D2	D3	D4	L1	L2	L3	L4 (Note)		L5	L6	L7	L8	M1	Weight (g)
									MAX.	MIN.						
10-AS1002F-02	2	6	3.2	5	6	25.4	3.4	7.9	20.9	18.4	11	9.8	5	6.7	8.8	3
10-AS1002F-23	3.2	8.4	3.3	5.5	9.1	36	4.4	11.1	23.8	21	11	15.4	8.8	9.8	12.7	5
10-AS1002F-04	4	9.3				37	5.1	11.8	24.5	21.7				10.1		5.5
10-AS1002F-06	6	11.6				39.5	6.1	12.8	25.5	22.7				12.3		6.5
10-AS2002F-04	4	9.3	3.3	5.5	10	40.7	5.2	12.3	28.9	25.4	12.6	17	10.5	11.5	12.7	8.5
10-AS2002F-06	6	11.6				42.5	6.3	13.4	30	26.5				12.3	9.5	
10-AS2052F-06	6	12.8	4.3	7.8	14	53.2	6.7	16.3	33.2	28.2	17	22.8	12	15.7	17	19
10-AS2052F-08	8	15.2				57.2	8	17.6	34.5	29.5				16.1	18	22
10-AS3002F-06	6	13.2	4.3	8	19.3	59	7.4	19.3	38.6	33.6	22	25	12	20.5	17	36
10-AS3002F-08	8	15.2				65	8.2	20.1	39.4	34.4					18	38
10-AS3002F-10	10	18.5				70.8	9.8	21.7	41	36					21	42
10-AS3002F-12	12	20.9	4.3	8	25	76	10.9	22.8	42.1	37.1	28	33	14	22.1	22	44
10-AS4002F-10	10	18.5				76.9	10.3	22.7	51.6	44.1				21	76	
10-AS4002F-12	12	21.7				81.3	11.3	23.7	52.6	45.1				22	82	

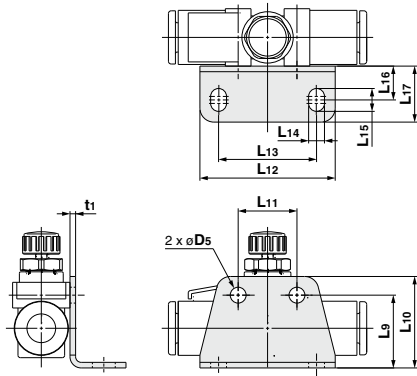
Note) Reference dimensions

The hexagon lock nut can be fastened by hand. When stronger tightening is required, please retighten using a tool. The recommended tightening torques for tools are shown in the table below. For standard installation, turn 15 to 30° using tool, after fastening by hand. Pay attention not to over torque the product.

Model	Recommended tightening torque (N·m)	Lock nut Hexagon width across flats
10-AS1002F-02	0.07	4.5
10-AS1002F	0.2	7
10-AS2002F	0.3	9
10-AS2052F	1	12
10-AS3002F	2	14
10-AS4002F	4	17

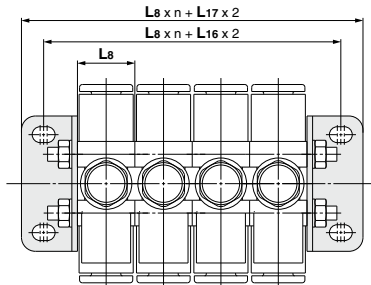
L-bracket

Bracket on a single side



Part no.	Applicable series	D5	L9	L10	L11	L12	L13	L14	L15	L16	L17	t1
AS-12L	10-AS1002F-02		9.9	13.4	11	27.5	19.5					1
AS-10L	10-AS1002F	3.4	14.8	18.3				3.4	4.9	7.3	12	1.2
AS-20L	10-AS2002F		15.6	19.6	12.6	29	21					1.2
AS-25L	10-AS2052F		19.6	24.6	17	38	28					1.2
AS-30L	10-AS3002F	4.5	24.8	29.8	22	43	33	4.5	6.5	9.5	15.5	1.4
AS-40L	10-AS4002F		25.7	30.7	28	49	39					1.4

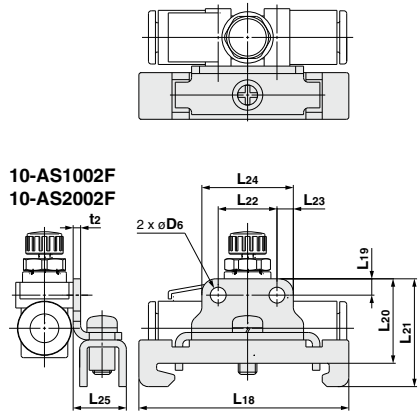
Brackets on both sides



*1 Refer to page 1259 for L_s.
 *2 The above figure shows the manifold with controllers connected using two L-brackets and a threaded stud kit for manifold.
 Refer to page 1257 for threaded stud kits for manifold.

DIN rail mounting bracket

Bracket on a single side

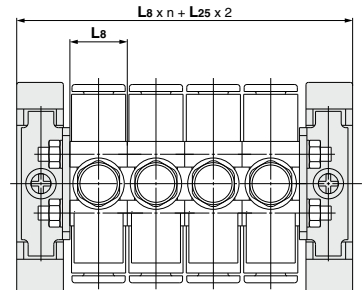


10-AS1002F
10-AS2002F

10-AS2052F
10-AS3002F
10-AS4002F

Part no.	Applicable series	D6	L18	L19	L20	L21	L22	L23	L24	L25	t2
AS-10D	10-AS1002F	3.4		3.5	18.2	23.2	11		3.5	18	
AS-20D	10-AS2002F			45	18.6	23.6	12.6			19.6	
AS-25D	10-AS2052F				22	27	17			25.8	
AS-30D	10-AS3002F	4.5	4.4		27.2	32.2	22	4.4		30.8	
AS-40D	10-AS4002F				28.1	33.1	28			36.8	

Brackets on both sides



*1 Refer to page 1259 for L_s.
 *2 The above figure shows the manifold with controllers connected using two DIN rail mounting brackets and a threaded stud kit for manifold.
 Refer to page 1257 for threaded stud kits for manifold.

- Directional Control Valves
- Air Cylinders
- Rotary Actuators
- Air Grippers
- Air Preparation Equipment
- Modular F. R.
- Pressure Control Equipment
- Fittings & Tubing
- Flow Control Equipment
- Pressure Switches/ Pressure Sensors