

5 Port Solenoid Valve

Body Ported

Series SY3000, 5000, 7000



◆ How to Order

SY **5** **1** 20- **5** **L** - **01** -

Bracket

Nil	Without bracket
F1	With foot bracket
F2	With side bracket

Thread type

Nil	Rc	F	G	N	NPT
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A, B port size(Thread piping)

Symbol	Port size	Applicable series
M5	M5×0.8	SY3000
01	1/8	SY5000
02	1/4	SY7000

Light/Surge voltage suppressor

Electrical entry for L	
Nil	Without light/surge voltage suppressor
Z	With light/surge voltage suppressor

Note): Z type only for 24VDC and 12VDC.

Electrical entry

L: L plug connector		
L: With lead wire (Length 300 mm)	LN: Without lead wire	LO: Without connector

Rated voltage

AC(50/60Hz)		DC	
3	110VAC[115VAC]	5	24VDC
4	220VAC[230VAC]	6	12VDC

Type of actuation

1	2	3
2 position single 	2 position double 	3 position closed center
4	5	
3 position exhaust center 	3 position pressure center 	

Series

3	SY3000	5	SY5000	7	SY7000
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II

VF
SY
SYJ
4V100
4V200
4V300
4V400
VT307
VP
3V
2W
2WH
2L
2V
2P
VFA
SYA
4A100
4A200
4A300
3A100
3A200
3A300
3L
4L
4H
SL,SH
4HV
HV,K
3FM
3F
4F
FV
MSV
MOV
JM
TAC
HSV
RE
ASC
KA
ACV
KS
QE
Manifold

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◆ Specifications

Series		SY3000	SY5000	SY7000
Fluid		Air		
Internal pilot	2 position single	0.15~0.7 MPa		
Operating pressure range	2 position double	0.1~0.7 MPa		
	3 position	0.2~0.7 MPa		
Ambient and fluid temperature		-10~50°C (No freezing)		
Max.operating frequency	2 position single,double	10 Hz	5 Hz	5 Hz
	3 position	3 Hz	3 Hz	3 Hz
Manual override(Manual operation)		Non-locking push type		
Pilot exhaust method		Common exhaust type for main and pilot valve		
Lubrication		Not required		
Mounting orientation		Unrestricted		
Impact/Vibration resistance		150/30 (m/s ²)		
Enclosure		Dustproof		

◆ Solenoid Specifications

Electrical entry		L plug connector(L)		
Coil rated voltage(V)	DC	24, 12		
	AC 50/60Hz	110, 220		
Allowable voltage fluctuation(%)		± 10% of rated voltage		
Power consumption	DC	Standard	0.35W (With indicator light: 0.4)	
	AC	110V	1.6VA	
220V		2.5VA		
Indicator light		LED		

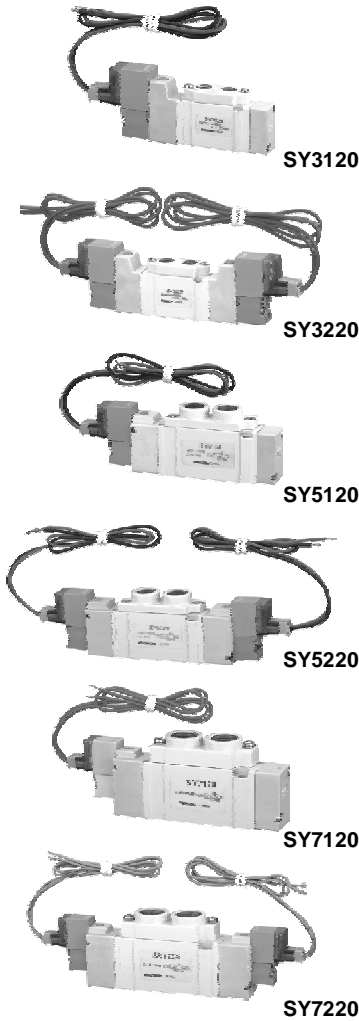
◆ Response Time

Series	Type of actuation	Response time (at the pressure of 0.5MPa)	
		Without light/surge voltage suppressor	With light/surge voltage suppressor Type Z
SY3000	2 position single	12ms or less	15ms or less
	2 position double	10ms or less	13ms or less
	3 position	15ms or less	20ms or less
SY5000	2 position single	19ms or less	26ms or less
	2 position double	18ms or less	22ms or less
	3 position	32ms or less	38ms or less
SY7000	2 position single	31ms or less	38ms or less
	2 position double	27ms or less	30ms or less
	3 position	50ms or less	56ms or less

◆ Flow Characteristics/Weight

Valve model	Type of actuation		Port size		Flow characteristics						Weight(g)
			1,5,3 (P,EA,EB)	4,2 (A,B)	1→4/2(P→A/B)			4/2→5/3(A/B→EA/EB)			
					C(kdm ³ /(s·bar))	b	Cv	C(kdm ³ /(s·bar))	b	Cv	
SY3□20-□-M5	2 position	Single	M5×0.8	M5×0.8	0.61	0.44	0.16	0.64	0.45	0.18	53
		Double									74
	3 position	Closed center			0.48	0.46	0.13	0.47	0.43	0.13	76
		Exhaust center			0.47	0.42	0.13	0.47 (0.44)	0.41 (0.37)	0.13 (0.12)	
SY5□20-□-01	2 position	Single	1/8	1/8	1.9	0.35	0.49	2.4	0.39	0.61	72
		Double									93
	3 position	Closed center			1.7	0.43	0.45	1.8	0.35	0.46	98
		Exhaust center			1.5	0.44	0.41	2.5 (1.5)	0.32 (0.43)	0.59 (0.40)	
SY7□20-□-02	2 position	Single	1(P) Port 1/4	1/4	4.1	0.23	0.93	3.3	0.33	0.81	104
		Double									125
	3 position	Closed center			2.9	0.31	0.70	2.4	0.38	0.63	133
		Exhaust center			2.5	0.39	0.65	3.4 (2.1)	0.35 (0.38)	0.82 (0.54)	
		Pressure center	4.3 (2.4)	0.23 (0.32)	0.97 (0.61)	2.2	0.39	0.59			

Note: () denotes normal position.



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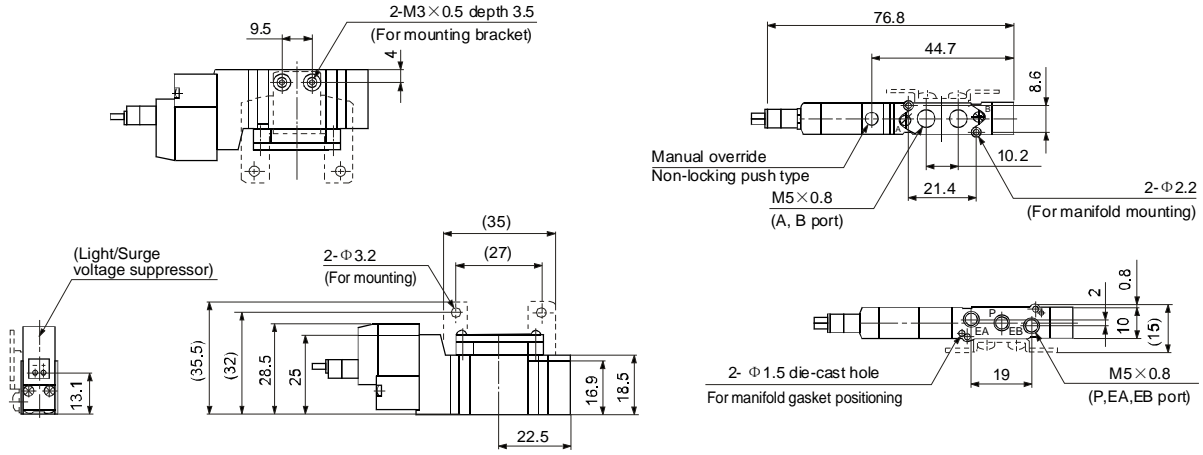
Series SY3000, 5000, 7000

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PNEUMATIC & HYDRAULIC

◆ Dimensions

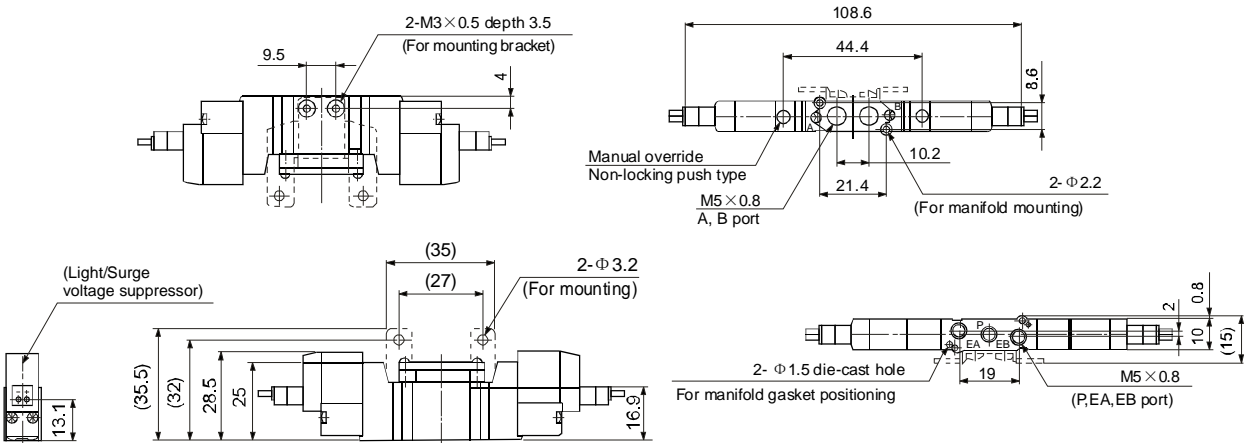
2 position single

L plug connector(L):SY3120-□L□-M5(-F2)



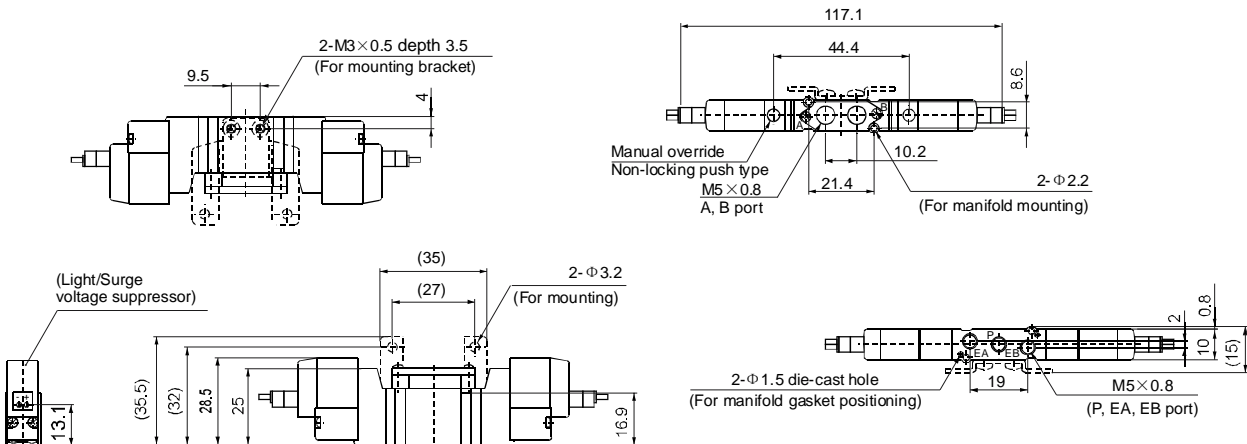
2 position double

L plug connector(L):SY3220-□L□-M5(-F2)



3 position closed center/exhaust center/pressure center

L plug connector(L):SY3³/₄20-□L□-M5(-F2)



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Manifold

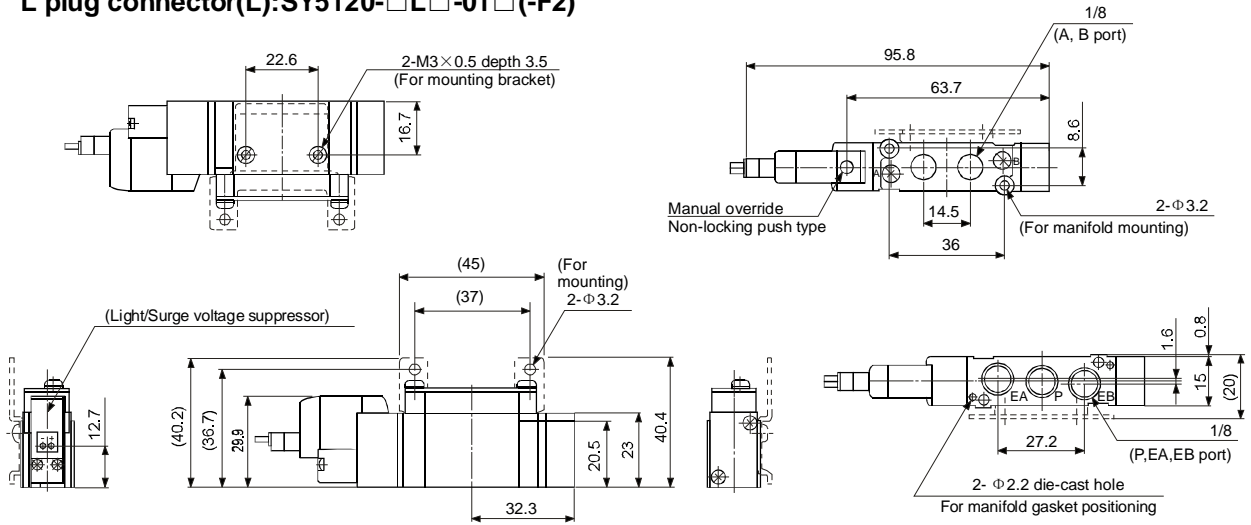
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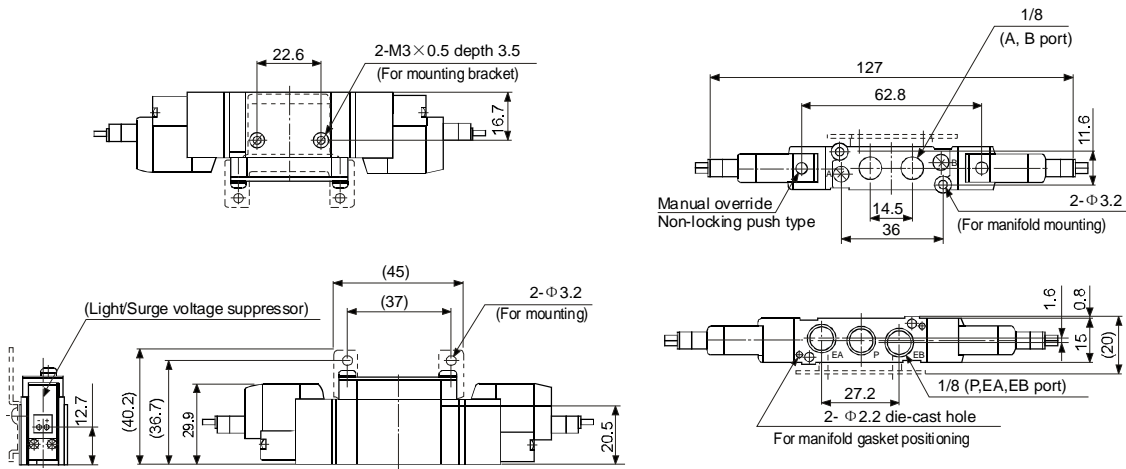
2 position single

L plug connector(L):SY5120-□L□-01□(-F2)



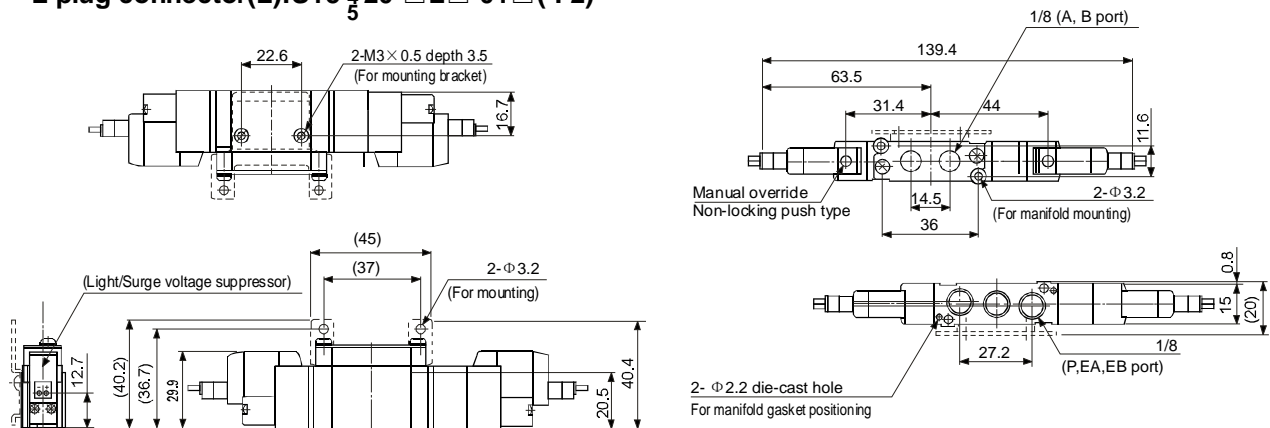
2 position double

L plug connector(L):SY5220-□L□-01□(-F2)



3 position closed center/exhaust center/pressure center

L plug connector(L):SY5³/₅20-□L□-01□(-F2)



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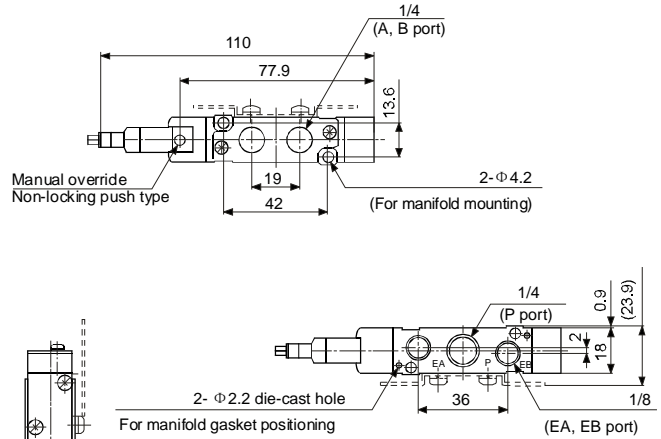
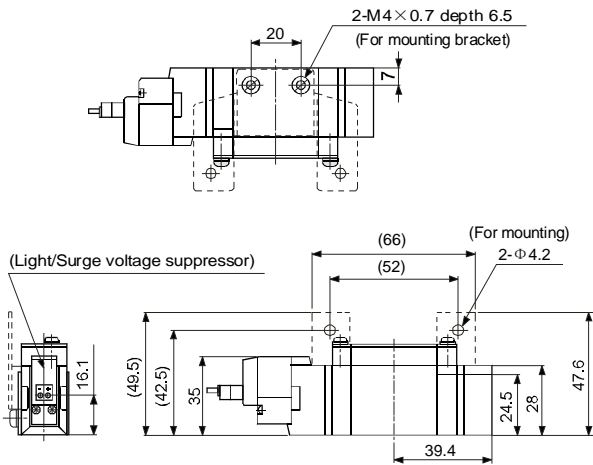
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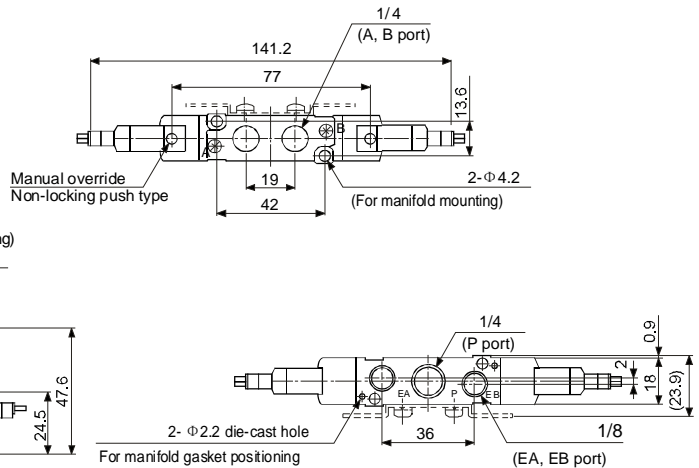
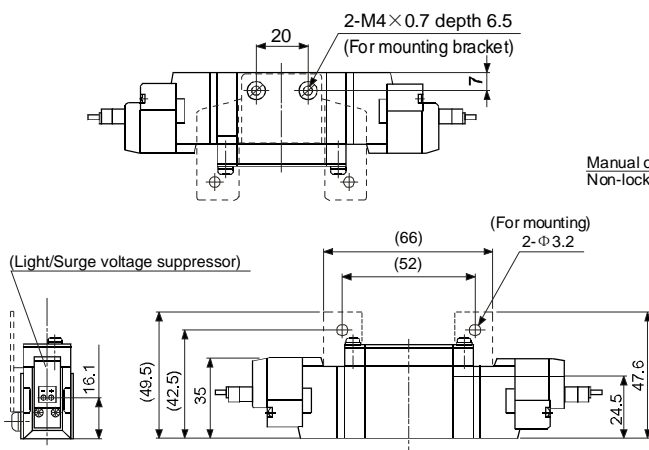
2 position single

L plug connector(L):SY7120-□L□-02□(-F2)



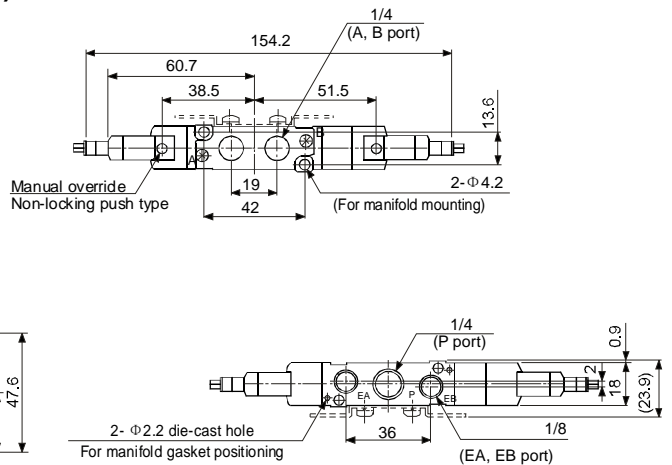
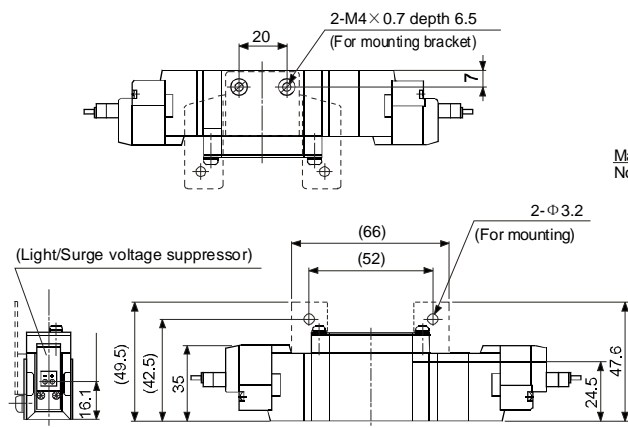
2 position double

L plug connector(L):SY7220-□L□-02□(-F2)



3 position closed center/exhaust center/pressure center

L plug connector(L):SY7³/₄20-□L□-02□(-F2)



II

VF

SY

SYJ

4V100

4V200

4V300

4V400

VT307

VP

3V

2W

2WH

2L

2V

2P

VFA

SYA

4A100

4A200

4A300

3A100

3A200

3A300

3L

4L

4H

SL,SH

4HV

HV,K

3FM

3F

4F

FV

MSV

MOV

JM

TAC

HSV

RE

ASC

KA

ACV

KS

QE

Manifold