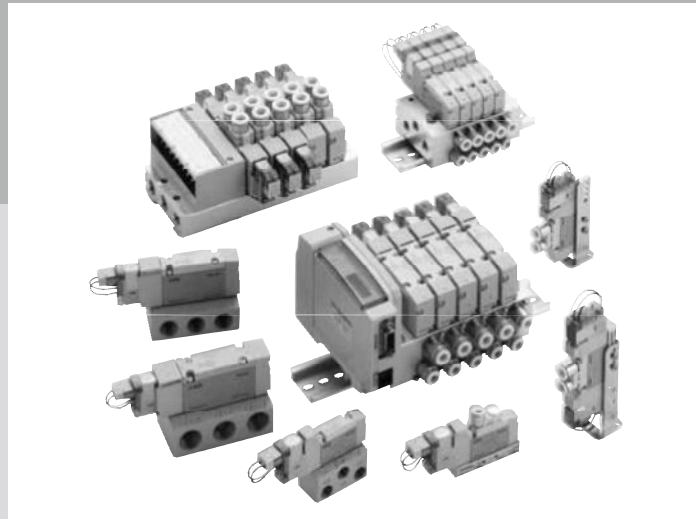


# 4GA1 to 3/4GB1 to 3

Pilot operated 3, 5-port valve

Metal base



## CONTENTS

Series variation	8
Electrical connections list (wire connections/circuit)	11
Product introduction	2
<b>Single valve</b>	
● Body piping (3GA1 to 3/4GA1 to 3)	12
● Base piping (3GB1 to 2/4GB1 to 3)	60
<b>Individual wiring manifold</b>	
● Body piping (M3GA1 to 3/M4GA1 to 3)	96
● Base piping (M3GB1 to 2/M4GB1 to 3)	112
<b>Reduced wiring manifold</b>	
● Body piping (M3GA1 to 3-T*(D)/M4GA1 to 3-T*(D))	
· Common terminal block/D sub-connector/flat cable connector/ Serial transmission	136
● Base piping (M3GB1 to 2-T*(D)/M4GB1 to 3-T*(D))	
· Common terminal block/D sub-connector/flat cable connector/ Serial transmission	158
Related products (in-stop valve spacer/air supply spacer/ exhaust spacer/pilot check valve/silencer/plug/DIN rail)	186
Related parts	196
Manifold specifications sheet	204
Technical data	
(1) Pneumatic system selection guide	744
(2) Notes on wiring	717
(3) Exhaust check valve	751
(4) How to expand reduced wiring manifold	736
▲ Safety precautions	750


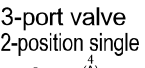
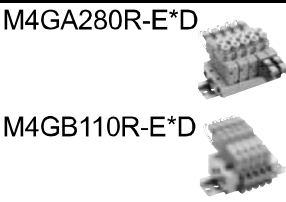

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# Series variation

# 4GA1 to 3/4GB1 to 3 Series

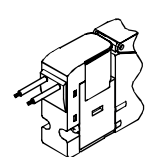
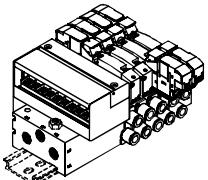
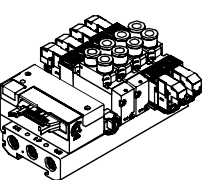
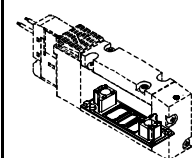
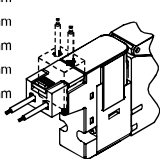
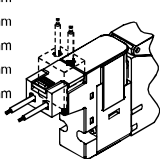
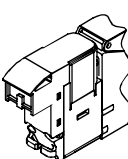
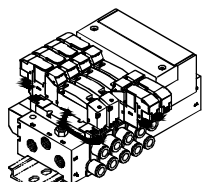
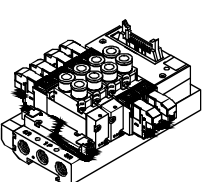
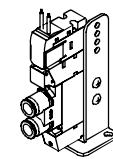
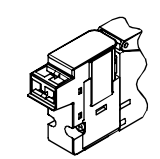
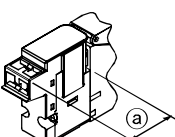
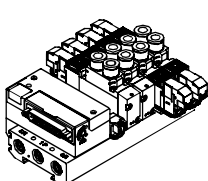
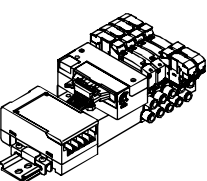
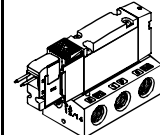
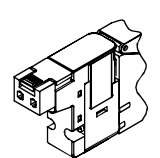
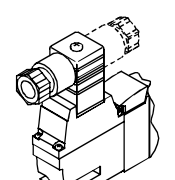
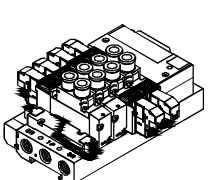
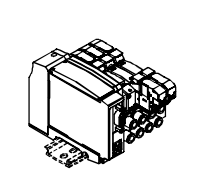
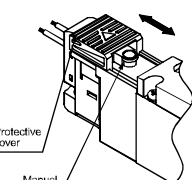
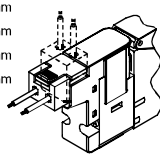
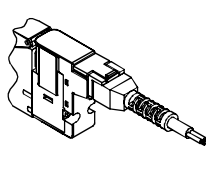
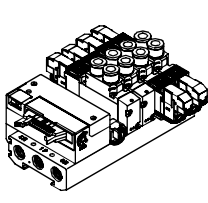
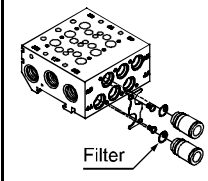
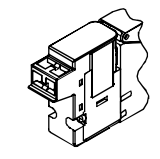
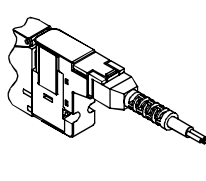
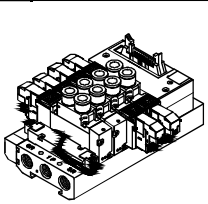
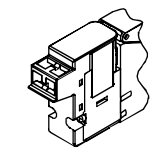
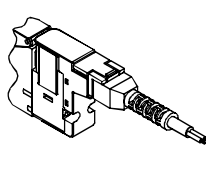
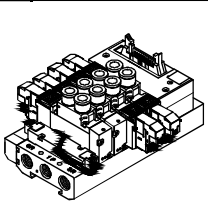
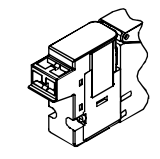
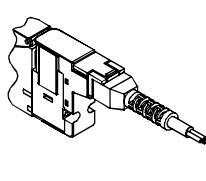
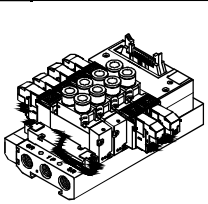
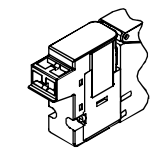
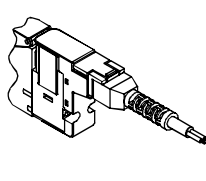
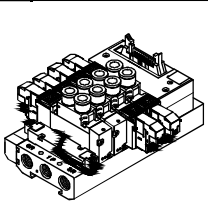
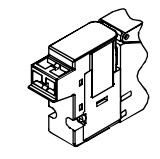
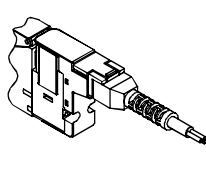
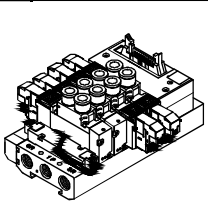
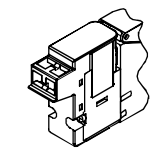
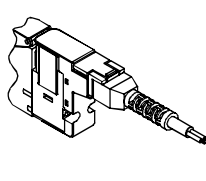
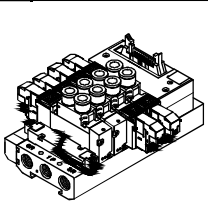
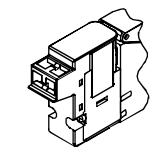
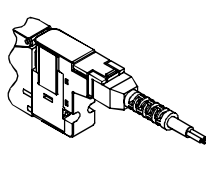
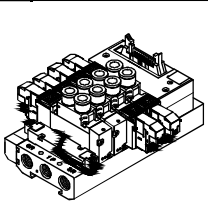
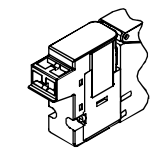
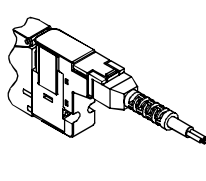
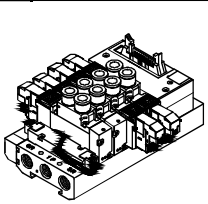
\* Refer to page 221 for block manifold.  
\* Refer to page 315 for the master valve.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

Series external appearance		Model No.	Position Number of solenoids JIS symbol	Valve performance	Voltage (V)	Switching position												
Flow characteristic C[dm <sup>3</sup> /(s·bar)] (*1)	Cylinder bore size (φ)	Normally closed	Normally open	Single		Double												
							Body piping	3-port	3GA1	 ● 3-port valve 2-position single NC	0.66 to 0.70	20 to 40	100 AC	●	●			
Base piping	5-port	3GA2	2.2 to 2.7	40 to 80		200 AC		●	●									
		3GA3	3.9	63 to 100				●	●									
		4GA1	0.66 to 0.70	20 to 40				12 DC			●	●						
		4GA2	2.4 to 2.7	40 to 80							●	●						
		4GA3	3.2 to 4.0	63 to 100							●	●						
		Body piping	3-port	3GB1			1.0		20 to 40	3 DC			●	●				
3GB2	2.1			40 to 80		5 DC					●	●						
4GB1	1.1 to 1.3			20 to 40			(*2)					●	●					
4GB2	2.2 to 2.5			40 to 80							●	●						
4GB3	3.2 to 4.2			63 to 100							●	●						
Base piping	5-port			4GB1				0.66 to 1.0	20 to 40		100 AC	●	●					
		4GB2	1.7 to 2.5	40 to 80	200 AC			●	●									
		4GB3	2.5 to 3.3	63 to 100		24 DC		●	●									
		Body piping	Direct mount DIN rail mount (-D)	M4GA1			0.67 to 1.0	20 to 40	12 DC				●	●				
				M4GA2			1.6 to 2.4	40 to 80		3 DC				●	●			
				M4GA3			2.6 to 3.3	63 to 100				5 DC			●	●		
Base piping	Direct mount DIN rail mount (-D)			M4GB1			0.66 to 1.0	20 to 40			(*2)				●	●		
				M4GB2	1.7 to 2.5		40 to 80							●	●			
				M4GB3	2.5 to 3.3	63 to 100							●	●				
			Body piping	Direct mount DIN rail mount (-D)	M4GA1	0.66 to 1.0	20 to 40	24 DC	●				●					
					M4GA2	1.7 to 2.5	40 to 80		12 DC	●			●					
					M4GA3	2.5 to 3.3	63 to 100			24 DC		●	●					
Base piping	Direct mount DIN rail mount (-D)				M4GB1	0.67 to 1.0	20 to 40				3 DC			●	●			
					M4GB2	1.6 to 2.4	40 to 80					5 DC			●	●		
					M4GB3	2.6 to 3.3	63 to 100						(*2)			●	●	
				Body piping	Direct mount	Terminal block (-T1□) Connector (-T30, -T5□)	M4GA1	0.66 to 1.0						20 to 40	24 DC	●	●	
						M4GA2	1.7 to 2.5	40 to 80	12 DC					●		●		
						M4GA3	2.5 to 3.3	63 to 100		24 DC				●		●		
Base piping	Direct mount					Terminal block (-T1□) Connector (-T30, -T5□)	M4GA1	0.66 to 1.0			20 to 40			24 DC		●	●	
							M4GA2	1.7 to 2.5			40 to 80	12 DC				●	●	
							M4GA3	2.5 to 3.3			63 to 100		24 DC			●	●	
		Body piping		DIN rail mount	Terminal block (-T1□) Connector (-T30D, -T5□D)		M4GA1	0.66 to 1.0			20 to 40				24 DC	●	●	
							M4GA2	1.7 to 2.5	40 to 80		12 DC					●	●	
							M4GA3	2.5 to 3.3	63 to 100	24 DC						●	●	
Base piping	DIN rail mount					Terminal block (-T1□) Connector (-T30, -T5□)	M4GB1	0.67 to 1.0	20 to 40					24 DC				●
							M4GB2	1.6 to 2.4	40 to 80			12 DC						●
							M4GB3	2.6 to 3.3	63 to 100				24 DC					●
		Body piping	DIN rail mount	Terminal block (-T1□) Connector (-T30D, -T5□D)	M4GB1		0.66 to 1.0	20 to 40	24 DC								●	●
					M4GB2		1.7 to 2.5	40 to 80			12 DC						●	●
					M4GB3		2.5 to 3.3	63 to 100		24 DC							●	●
Base piping	DIN rail mount				Terminal block (-T1□) Connector (-T30D, -T5□D)	M4GB1	0.67 to 1.0	20 to 40						24 DC			●	●
						M4GB2	1.6 to 2.4	40 to 80				12 DC					●	●
						M4GB3	2.6 to 3.3	63 to 100					24 DC				●	●
		Body piping	DIN rail mount	Terminal block (-T1□) Connector (-T30D, -T5□D)		M4GB1	0.66 to 1.0	20 to 40	24 DC								●	●
						M4GB2	1.7 to 2.5	40 to 80			12 DC						●	●
						M4GB3	2.5 to 3.3	63 to 100		24 DC							●	●
Base piping	DIN rail mount				Terminal block (-T1□) Connector (-T30D, -T5□D)	M4GB1	0.67 to 1.0	20 to 40						24 DC			●	●
						M4GB2	1.6 to 2.4	40 to 80				12 DC					●	●
						M4GB3	2.6 to 3.3	63 to 100					24 DC				●	●



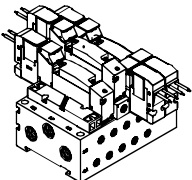
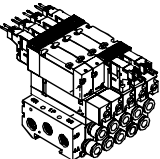
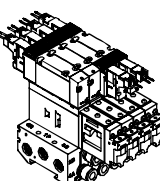
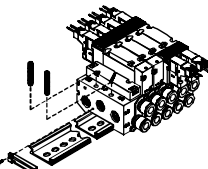
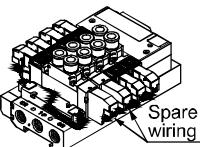
# 4GA1 to 3/4GB1 to 3 Series

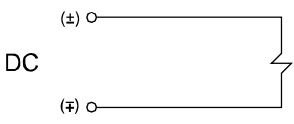
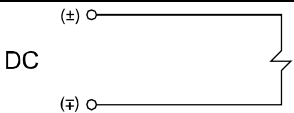
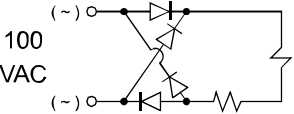
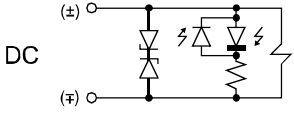
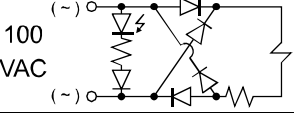
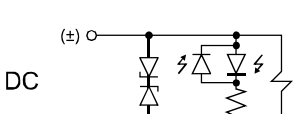
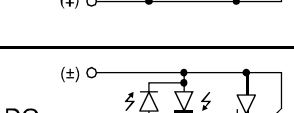
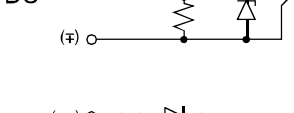
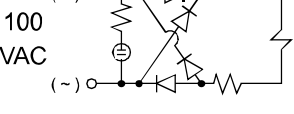
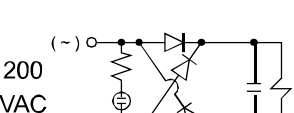
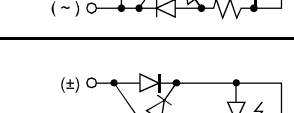
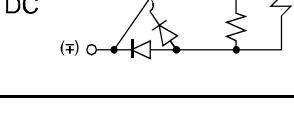
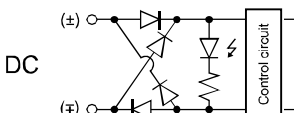

4GA/B		Electrical connections				Manual override	Other options
M4GA/B	MN4GA/B	Discrete valve/individual wiring manifold		Reduced wiring manifold			
4GA/B (mastr)	4GD/E	<b>Blank</b> Grommet lead wire ①	<b>E3</b> E type connector with socket/terminal (L S)	<b>T10</b> <b>T11</b> Common terminal block (left side) M3 thread specifications/ push tightening specifications	<b>T51</b> <b>T52</b> <b>T53</b> Flat cable without power supply terminal (left side)	<b>Blank</b> Non-locking/locking common type	<b>H</b> With exhaust check valve
4GD/E	M4GD/E	● Lead wire length 300 mm				(Standard equipment)	
M4GD/E	MN4GD/E		<b>E0</b> E type connector ①	<b>A2N</b> A type connector downward without socket	<b>T10R</b> <b>T11R</b> Common terminal block (right side) M3 thread specifications/ push tightening specifications	<b>T51R</b> <b>T52R</b> <b>T53R</b> Flat cable without power supply terminal (right side)	<b>P</b> Mounting plate
4GA4/B4	MN3E MN4E	● Lead wire length 300 mm 500 mm 1000 mm 2000 mm 3000 mm					
4GA/B2	W4GB4	<b>E0N</b> E type connector without socket	● For AC voltages, the (a) dimension is 3.5 mm longer than for DC voltages.	<b>T30</b> D sub-connector (left)	<b>T6</b> <sup>1/2</sup> Serial transmission	(1) For non-locking, push to turn ON, release to turn OFF  (2) For locking, push and turn 90° clockwise to hold the ON state. Turn counterclockwise to unlock OFF	<b>K</b> External pilot
4TB	4L2-4/ LMF0						
MN3S0 MN4S0	4SA/B0	<b>E1</b> E type connector with socket/terminal	<b>B</b> <b>BN</b> DIN terminal box (BN: Without terminal box)	<b>T30R</b> D sub-connector (right)	<b>T8</b> <sup>1/2</sup> Serial DIN transmission (thin)	<b>M</b> Non-locking	<b>A</b> Ozone/coolant proof product
4KA/B	4KA/B (mastr)						Select for cutting oil inflow and ozone measures.
4F	4F (mastr)	<b>E2</b> E type connector ① L S	<b>E0*J</b> EJ type connector ①	<b>T50</b> Flat cable with power supply terminal (left side)	<b>T50R</b> Flat cable with power supply terminal (right side)	<b>F</b> A/B port filter integrated	
PV5G GMF	PV5 GMF	● Lead wire length 300 mm 500 mm 1000 mm 2000 mm 3000 mm					
PV5S-0	3QR 3QB	<b>E2N</b> E type connector without socket (L S)	<b>E2*J</b> EJ type connector ① L S	<b>T50R</b> Flat cable with power supply terminal (right side)		<b>F</b> A/B port filter integrated	
3QR 3QB	MV3QR					<b>F</b> A/B port filter integrated	
3MA/B0	3PA/B					<b>F</b> A/B port filter integrated	
P/M/B	NP/NAP/ NVP					<b>F</b> A/B port filter integrated	
4F*0EX	4F*0E					<b>F</b> A/B port filter integrated	
HMV HSV	2QV 3QV					<b>F</b> A/B port filter integrated	
SKH	PCD					<b>F</b> A/B port filter integrated	
Slencer	TotAirSys (TotalAir)					<b>F</b> A/B port filter integrated	
TotAirSys (Gamma)	Ending					<b>F</b> A/B port filter integrated	

①: With lead wire  
L: With indicator lamp  
S: With surge suppressor

Cylinder B port  
Cylinder A port

## Electric connection circuit diagram

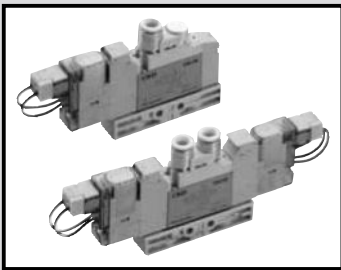
Other options	
<b>Z1</b>	Air supply spacer
<b>Z3</b>	Exhaust spacer
	
<b>Z2</b>	In-stop valve spacer
	
<b>Z6</b>	Spacer pilot check valve
	
<b>D</b>	DIN rail mount
	
<b>W1</b>	Double wiring (with single spare wiring)
	

Electrical connections		Without lead wire	With lead wire	With indicator lamp	With surge suppressor	Without socket	Circuit diagram
Blank	Grommet lead wire		●				DC 
E0	E type connector		●				DC 
E0*J	EJ type connector		●				DC 
E0N	E type connector					●	100 VAC 
E1	E type connector	●					100 VAC 
E2	E type connector		●	●	●		DC 
E2*J	EJ type connector		●	●	●		DC 
E2N	E type connector			●	●	●	100 VAC 
E3	E type connector	●		●	●		100 VAC 
A2N	A type connector			●	●	●	DC 
B	DIN terminal box	●		●	●		DC 
BN	DIN terminal box (Without terminal box)	●				●	100 VAC 
Option S	E2	E type connector		●	●	●	DC 
	E2*J	EJ type connector		●	●	●	DC 
	E2N	E type connector			●	●	●
Option E	E2	E type connector		●	●	●	DC 
	E2*J	EJ type connector		●	●	●	DC 
	E2N	E type connector			●	●	●

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)

Ending

4GA/B  
M4GA/B  
MN4GA/B  
4GA/B (mastr)  
4GD/E  
M4GD/E  
MN4GD/E  
4GA4/B4  
MN3E  
MN4E  
W4GA/B2  
W4GB4  
4TB  
4L2-4/  
LMF0  
MN3S0  
MN4S0  
4SA/B0  
4KA/B  
4KA/B (mastr)  
4F  
4F (mastr)  
PV5G  
GMF  
PV5  
GMF  
PV5S-0  
3QR  
3QB  
MV3QR  
3MA/B0  
3PA/B  
P/M/B  
NP/NAP/  
NVP  
4F\*0EX  
4F\*0E  
HMV  
HSV  
2QV  
3QV  
SKH  
PCD  
Silencer  
TotAirSys  
(TotalAir)  
TotAirSys  
(Gamma)  
Ending



Single valve  
Body piping

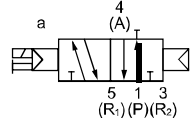
# 3GA1/2/3 / 4GA1/2/3 Series

● Cylinder bore size:  $\phi 20$  to  $\phi 100$

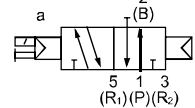


## JIS symbol

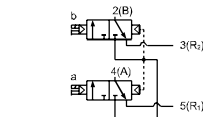
- 3-port valve  
2-position single NC



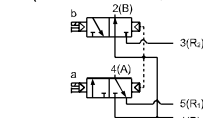
- 2-position single NO



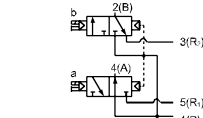
- Two 3-port valves integrated  
(A side valve: NC, B side valve: NC)



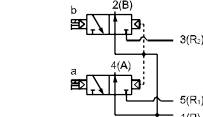
- Two 3-port valves integrated  
(A side valve: NO, B side valve: NO)



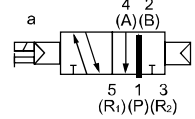
- Two 3-port valves integrated  
(A side valve: NC, B side valve: NC)



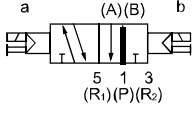
- Two 3-port valves integrated  
(A side valve: NO, B side valve: NO)



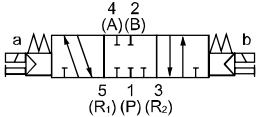
- 5-port valve  
2-position single



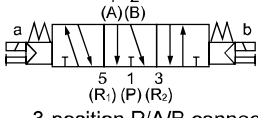
- 2-position double



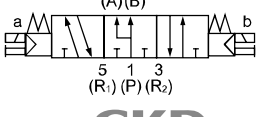
- 3-position all ports closed



- 3-position A/B/R connection



- 3-position P/A/B connection



## Common specifications

Descriptions	Content
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 ( $\approx 100$ psi, 7 bar)
Min. working pressure MPa	0.2 ( $\approx 29$ psi, 2 bar)
Proof pressure MPa	1.05 ( $\approx 150$ psi, 10.5 bar)
Ambient temperature °C	-5 (23°F) to 55 (131°F) (no freezing)
Fluid temperature °C	5 (41°F) to 55 (131°F)
Manual override	Lock/no lock common (standard)
Pilot exhaust method	Main valve/pilot valve common exhaust
Lubrication *1	Not required
Degree of protection *2	Dust-proof
Vibration resistance m/s <sup>2</sup>	50 or less
Shock resistance m/s <sup>2</sup>	300 or less
Atmosphere	Corrosive gas environment prohibited

\*1: Use turbine oil Class 1 ISO VG32 for lubrication.  
Excessive or intermittent lubrication results in unstable operation.  
\*2: Avoid water drops or oil, etc., during use.  
IP65 (jet-proof) applies for DIN terminal box specifications. However, the specified outer diameter of the applicable cord and tightening torque must be used for fixing in place.

## Individual specifications

Port size		3GA1, 4GA1	3GA2, 4GA2	3GA3, 4GA3
Rc thread	A/B port	Barbed fitting $\phi 1.8$ push-in fitting $\phi 1.8$ , $\phi 4$ , $\phi 6$	Push-in fitting $\phi 4$ , $\phi 6$ , $\phi 8$	Push-in fitting $\phi 6$ , $\phi 8$ , $\phi 10$
	M5	M5	Rc1/8	Rc1/4
NPT thread	A/B Port	Push-in fitting $\phi 1/8"$ , $\phi 5/32"$	Push-in fitting $\phi 1/4"$ , $\phi 5/16"$ 1/8NPT	Push-in fitting $\phi 5/16"$ , $\phi 3/8"$ 1/4NPT (*5)
	M5	M5	1/8NPT	1/4NPT (*5)
G thread	A/B Port	-	Push-in fitting $\phi 4$ , $\phi 6$ , $\phi 8$ G1/8	-
	P/R1/R2 port	-	G1/8	-

\*5: Available as custom-order.

Descriptions	3GA1		3GA2		3GA3		4GA1		4GA2		4GA3	
	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
Response time	Two 3-port valves integrated											
	2-position Single											
	Double											
ms	3-position ABR connection											
	ms											

Values with lamp/surge suppressor are shown. The response times are the values with supply pressure of 0.5 MPa at 20°C without lubrication. They depend on the pressure and the lubricant quality.

Descriptions		3GA1	3GA2	3GA3	4GA1	4GA2	4GA3
Weight g	2-position	Single	Grommet lead wire	48(41)	104(74)	142(100)	48(41)
		E type connector	50(43)	106(76)	144(102)	50(43)	
		DIN terminal box	-	141(111)	177(135)	-	
	3-position	Double	Grommet lead wire	-	-	65(58)	127(97)
		E type connector	-	-	-	69(62)	131(101)
		DIN terminal box	-	-	-	-	169(139)
All ports closed	All ports closed	Grommet lead wire	-	-	67(60)	139(109)	
	E type connector	-	-	-	71(64)	143(113)	
	DIN terminal box	-	-	-	-	181(151)	

• Values in ( ) do not include the pipe adaptor. Values for the E type connector include the socket assembly (with 300 mm lead wire). For the EJ type connector, add 16 g/connector to the E type connector weight.  
• The weight of the two 3-port valves integrated is the same as that of 2-position double.

## Flow characteristics

Model No.	Solenoid position	P→A/B		A/B→R1/R2		
		C[dm <sup>3</sup> /(s·bar)]	b	C[dm <sup>3</sup> /(s·bar)]	b	
<b>3GA1</b> <b>4GA1</b>	Two 3-port valves integrated	0.98	0.45	0.71	0.34	
	2-position	1.2	0.47	0.72	0.37	
	3-position	All ports closed	1.1	0.39	0.70	0.34
		ABR connection	1.1	0.33	0.72	0.34
		PAB connection	1.3	0.61	0.72	0.36
<b>3GA2</b> <b>4GA2</b>	Two 3-port valves integrated	1.8	0.29	2.3	0.32	
	2-position	2.4	0.33	2.8	0.30	
	3-position	All ports closed	2.2	0.28	2.5	0.28
		ABR connection	2.3	0.26	2.8	0.27
		PAB connection	2.5	0.38	2.4	0.30
<b>3GA3</b> <b>4GA3</b>	2-position	3.4	0.29	4.0	0.24	
	3-position	All ports closed	3.1	0.27	3.4	0.28
		ABR connection	3.1	0.33	4.1	0.20
		PAB connection	3.5	0.43	3.4	0.32

\*1: Effective cross-sectional area S and sonic conductance C are converted as  $S \approx 5.0 \times C$ .

Ozone-proof specifications - Coolant proof specifications

Can be selected with “How to order” Item ⑤ option “A” on page 14.

Clean-room specifications

- Anti-dust generation structure for use in cleanrooms

\*\* - Voltage - **P7\***

Specifications for rechargeable battery (Catalog No. CC-1226A)

- For use in the rechargeable battery manufacturing process, materials used for air path and sliding section are limited

\*\* - Voltage - **P4**

CE marking specifications

\*\* - Voltage - **ST**

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F\*0EX
- 4F\*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

# 3GA1/2/3 / 4GA1/2/3 Series

Single valve; body piping

## How to order

4GA1 1 0 R - C6 - E2 - 1

3GA1 1 0 R - C6 - E2 - 1

Discrete valve for mounting base

4GA1 1 9 R - C6 - E2 H - 3

Discrete 3 port valve for mounting base

3GA1 1 9 R - C6 - E2 H - 3

**B** Solenoid position

**A** Model No.

**C** Port size

**D** Electrical connections

Refer to page 11 for the circuit diagram with surge suppressor/lamp.

**E** Option

**F** Voltage

### ⚠ Precautions for model No. selection

- \*1 : For the 3GA normally closed, the piping connection 2 (B) and 3 (R2) ports are plugged.  
For 3GA normally open type, avoid plugging the 5 (R1) port.  
Otherwise, malfunctions may result.
- \*2 : Dimensions are the same as the respective 2-position double solenoid.
- \*3 : 4G3 is a custom order product.
- \*4 : 3-position all ports closed and PAB connection are not provided with the exhaust check valve.  
Refer to page 751 for details on the exhaust check valve.
- \*5 : E2\* type and E2\*J type connectors support 12/24 VDC only.  
In addition, surgeless "S" and low exoergic/energy-saving circuit "E" cannot be selected together.
- \*6 : Surgeless specifications.
- \*7 : A filter is built into the P-port as standard.
- \*8 : Only the DIN terminal box is supported.

**A** Model No.

3GA1 3GA2 3GA3 4GA1 4GA2 4GA3

Code	Content	3GA1	3GA2	3GA3	4GA1	4GA2	4GA3
<b>B Solenoid position</b>							
1	2-position single				●	●	●
2	2-position double				●	●	●
3	3-position all ports closed				●	●	●
4	3-position ABR connection				●	●	●
5	3-position PAB connection				●	●	●
1	2-position single normally closed *1	●	●	●			
11	2-position single normally open *1	●	●	●			
66	Two 3-port valves integrated *2	●	●				
67	Two 3-port valves integrated *2	A side valve: Normally closed					
		B side valve: Normally open					
76	Two 3-port valves integrated *2	A side valve: Normally open					
		B side valve: Normally closed					
77	Two 3-port valves integrated *2	A side valve: Normally open					
		B side valve: Normally open					
<b>C Port size</b>							
Port	4(A)/2(B) port	P/R1/R2 port (1) = M5, (2) = Rc1/8, (3) = Rc1/4					
CF	φ1.8 barbed fitting (compatible tube UP-9102-**) (1)			(1)			
C18	φ1.8 push-in fitting (compatible tube UP-9402-**) (1)			(1)			
C4	φ4 push-in fitting (1) (2)			(1) (2)			
C6	φ6 push-in fitting (1) (2) (3) (1) (2) (3)						
C8	φ8 push-in fitting (2) (3) (2) (3)						
C10	φ10 push-in fitting (3) (3)						
M5	M5 (1) (1)						
06	Rc1/8 (2) (2)						
08	Rc1/4 (3) (3)						
Port	4(A)/2(B) port	P/R1/R2 port (1) = M5, (5) = 1/8NPT, (6) = 1/4NPT					
C3N	φ1/8" push-in fitting (1) (1)						
C4N	φ5/32" push-in fitting (1) (1)						
C6N	φ1/4" push-in fitting (5) (5)						
C8N	φ5/16" push-in fitting (*3) (5) (6) (5) (6)						
C10N	φ3/8" push-in fitting (*3) (6) (6)						
06N	1/8NPT (5) (5)						
08N	1/4 NPT (*3) (6) (6)						
Port	4(A)/2(B) port	P/R1/R2 port (8) = G1/8					
C4G	φ4 push-in fitting (8) (8)						
C6G	φ6 push-in fitting (8) (8)						
C8G	φ8 push-in fitting (8) (8)						
06G	G1/8 (8) (8)						
<b>D Electrical connections</b>							
Refer to the electrical connection list on next page.							
<b>E Option</b>							
Blank	Non-locking/locking common manual override	●	●	●	●	●	●
M	Non-locking manual override	●	●	●	●	●	●
H	With exhaust check valve (*4)	●	●	●	●	●	●
P	With mounting plate	●	●	●	●	●	●
A	Ozone/coolant proof	●	●	●	●	●	●
S	Surgeless (*5)	●	●	●	●	●	●
E	Low exoergic/energy saving circuit (*5), (*6)	●	●	●	●	●	●
F	A/B port filter integrated (*7)	●	●	●	●	●	●
<b>F Voltage</b>							
1	100 VAC (rectifier integrated)	●	●	●	●	●	●
2	200 VAC (rectifier integrated) (*8)		●	●	●	●	●
3	24 VDC	●	●	●	●	●	●
4	12 VDC	●	●	●	●	●	●
7	3 VDC	○	○	○	○	○	○
8	5 VDC	○	○	○	○	○	○

is not available.

○ indicates a custom order.



[Electrical connections list]

		A Model No.					
		3GA1	3GA2	3GA3	4GA1	4GA2	4GA3
<b>D Electrical connections</b>							
Blank	Grommet lead wire (300 mm) (*9)	●	●	●	●	●	●
B	DIN terminal box (Pg7) With surge suppressor/lamp (*10)		●	●		●	●
BN	DIN term. box (Pg7) (no terminal box) + surge suppressor *10		●	●		●	●
<b>E type connector (upward/lateral common)</b>							
E0	Lead wire (300 mm) (*11)	●	●	●	●	●	●
E00	Lead wire (500 mm) (*11)	●	●	●	●	●	●
E01	Lead wire (1000 mm) (*11)	●	●	●	●	●	●
E02	Lead wire (2000 mm) (*11)	●	●	●	●	●	●
E03	Lead wire (3000 mm) (*11)	●	●	●	●	●	●
E0N	Without lead wire (without socket)	●	●	●	●	●	●
E1	Without lead wire (socket/terminal attached) (*11)	●	●	●	●	●	●
E2	Lead wire (300 mm), surge suppressor/indicator lamp	●	●	●	●	●	●
E20	Lead wire (500 mm), surge suppressor/indicator lamp	●	●	●	●	●	●
E21	Lead wire (1000 mm), surge suppressor/indicator lamp	●	●	●	●	●	●
E22	Lead wire (2000 mm), surge suppressor/indicator lamp	●	●	●	●	●	●
E23	Lead wire (3000 mm), surge suppressor/indicator lamp	●	●	●	●	●	●
E2N	No lead wire (without socket), surge suppressor/indicator lamp	●	●	●	●	●	●
E3	No lead wire (with socket/terminal), surge suppressor/indicator lamp	●	●	●	●	●	●
<b>EJ type connector (socket with cover, upward/lateral common)</b>							
E01J	Lead wire (1000 mm) (*11)	●	●	●	●	●	●
E02J	Lead wire (2000 mm) (*11)	●	●	●	●	●	●
E03J	Lead wire (3000 mm) (*11)	●	●	●	●	●	●
E21J	Lead wire (1000 mm), surge suppressor, indicator lamp	●	●	●	●	●	●
E22J	Lead wire (2000 mm), surge suppressor, indicator lamp	●	●	●	●	●	●
E23J	Lead wire (3000 mm), surge suppressor, indicator lamp	●	●	●	●	●	●

\*9 : Grommet lead wire specifications are compatible with DC voltage only.

\*10: AC voltages and 12/24 VDC are supported. In addition, a lamp comes with the terminal box.

\*11: AC voltage is with a rectifier circuit.

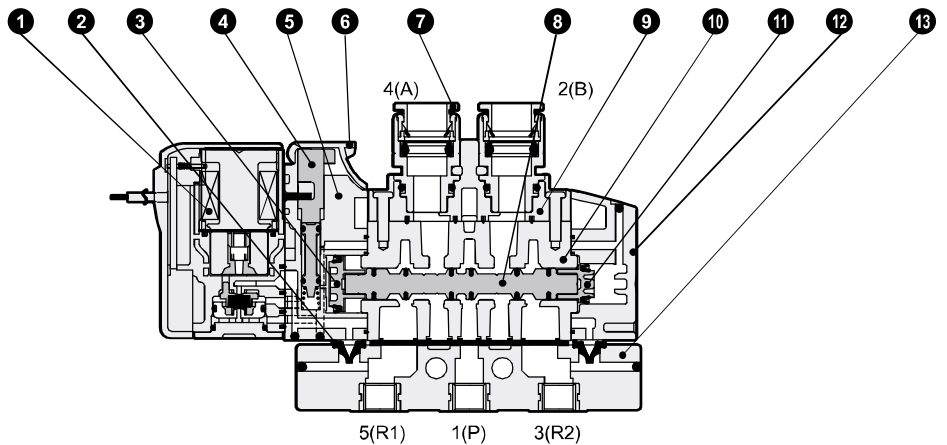
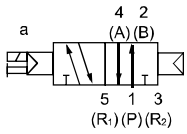
Electrical connections			
Blank	Grommet lead wire	E1 E3	E type connector with socket/terminal
	● Lead wire length 300 mm		
E0 E2	E type connector	B	DIN terminal box
E0 E2	● Lead wire length 300 mm 500 mm 1000 mm 2000 mm 3000 mm		
	E0N E2N	E type connector without socket	BN
E0J E2J	● Lead wire length 1 m 2 m 3 m		

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

## Internal structure and parts list

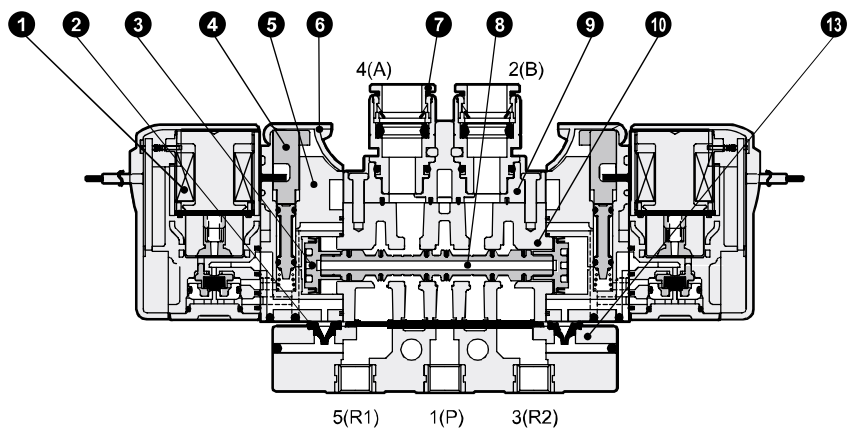
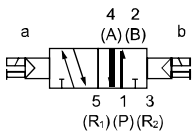
### 4GA110R

- 2-position single
- Grommet lead wire (blank)



### 4GA120R

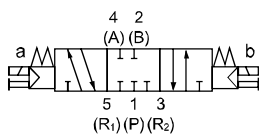
- 2-position double
- Grommet lead wire (blank)



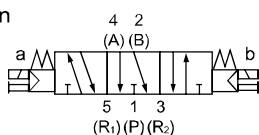
### 4GA1<sup>3</sup>/<sub>5</sub>0R

- 3-position
- Grommet lead wire (blank)

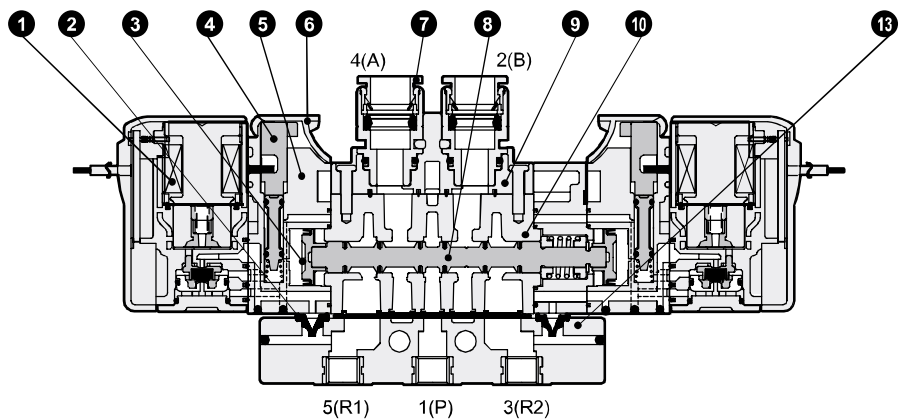
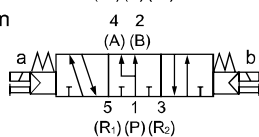
All ports closed



A/B/R connection



P/A/B connection



## Main parts list

No.	Part name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber
3	Piston D assembly	-
4	Manual override	Resin
5	Piston chamber	Resin
6	Manual protection cover	Resin
7	Cartridge push-in fitting or barbed fitting	-
8	Spool assembly	-
9	Fitting adaptor	Resin
10	Body	Aluminum alloy die-casting
11	Piston S assembly	-
12	Cap	Resin
13	Pipe adaptor	Resin
14	Plug cartridge	Aluminum

## Parts list

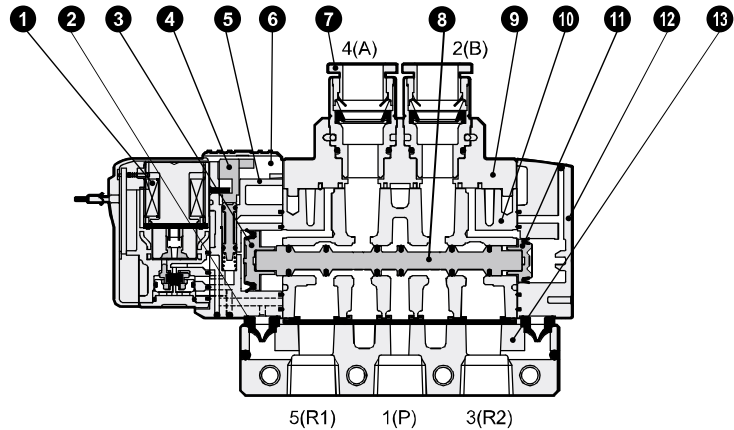
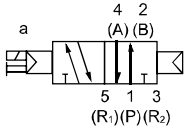
No.	Part name	Model No.
1	Coil assembly	4GR <input type="checkbox"/> - COIL - Voltage
		Blank: Standard A: Ozone specifications S: Surgeless E: Low exothermic/energy saving circuit Blank: Grommet lead wire
7	Cartridge push-in fitting and related parts	φ1.8 barbed 4G1R-JOINT-CF
		φ1.8 axial 4G1R-JOINT-C18
		φ4 straight 4G1R-JOINT-C4
		φ6 straight 4G1R-JOINT-C6
		Plug cartridge 4G1R-JOINT-CPG
		φ1/8" straight 4G1R-JOINT-C3N
	φ5/32" straight 4G1R-JOINT-C4N	

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

## Internal structure and parts list

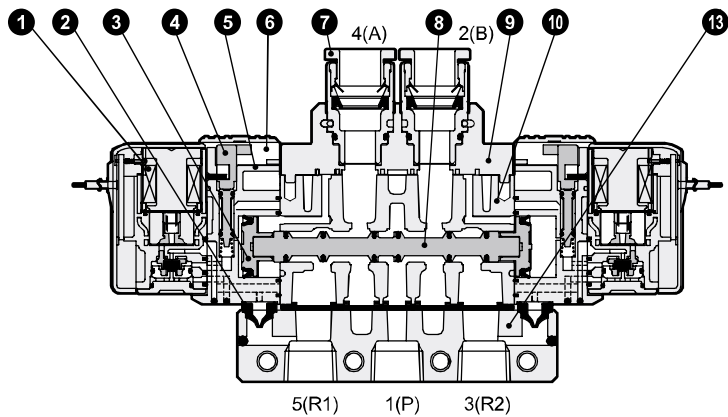
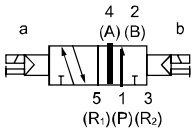
### 4GA210R/4GA310R

- 2-position single
- Grommet lead wire (blank)



### 4GA220R/4GA320R

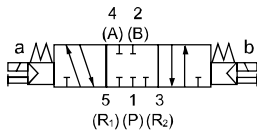
- 2-position double
- Grommet lead wire (blank)



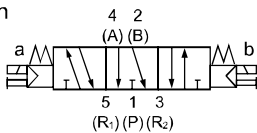
### 4GA2<sup>3</sup>/<sub>5</sub>0R/4GA3<sup>3</sup>/<sub>5</sub>0R

- 3-position
- Grommet lead wire (blank)

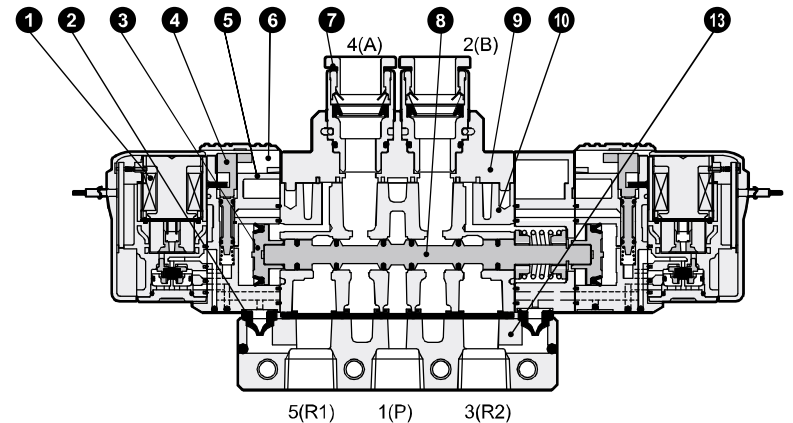
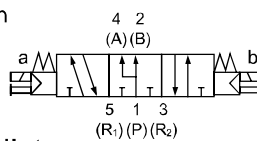
All ports closed



A/B/R connection



P/A/B connection



## Main parts list

No.	Part name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber
3	Piston D assembly	-
4	Manual override	Resin
5	Piston chamber	Resin
6	Manual protection cover	Resin
7	Cartridge push-in fitting	-
8	Spool assembly	-
9	Fitting adaptor	Resin
10	Body	Aluminum alloy die-casting
11	Piston S assembly	-
12	Cap	Resin
13	Pipe adaptor	Aluminum alloy die-casting

## Parts list

No.	Part name	Model No.
1	Coil assembly	4GR <input type="checkbox"/> -electrical connections- <input type="checkbox"/> -COIL- <input type="checkbox"/> -voltage
		Blank: Standard A: Ozone specifications S: Surgeless E: Low exothermic energy saving circuit Blank: Grommet lead wire
7	Cartridge push-in fitting and related parts	φ4 straight 4G2R-JOINT-C4
		φ6 straight 4G2R-JOINT-C6
		φ8 straight 4G2R-JOINT-C8
		Plug cartridge 4G2R-JOINT-CPG
		φ1/4" straight 4G2R-JOINT-C6N
		φ5/16" straight 4G2R-JOINT-C8N
		φ6 straight 4G3R-JOINT-C6
		φ8 straight 4G3R-JOINT-C8
		φ10 straight 4G3R-JOINT-C10
		Plug cartridge 4G3R-JOINT-CPG
φ5/16" straight 4G3R-JOINT-C8N		
φ3/8" straight 4G3R-JOINT-C10N		

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GA1 Series

Single valve; body piping

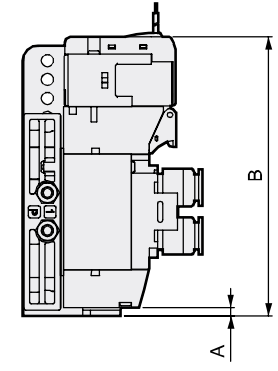
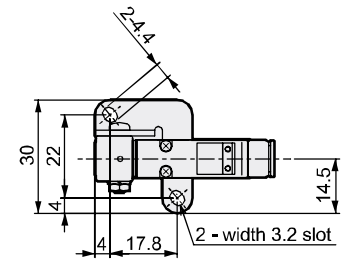
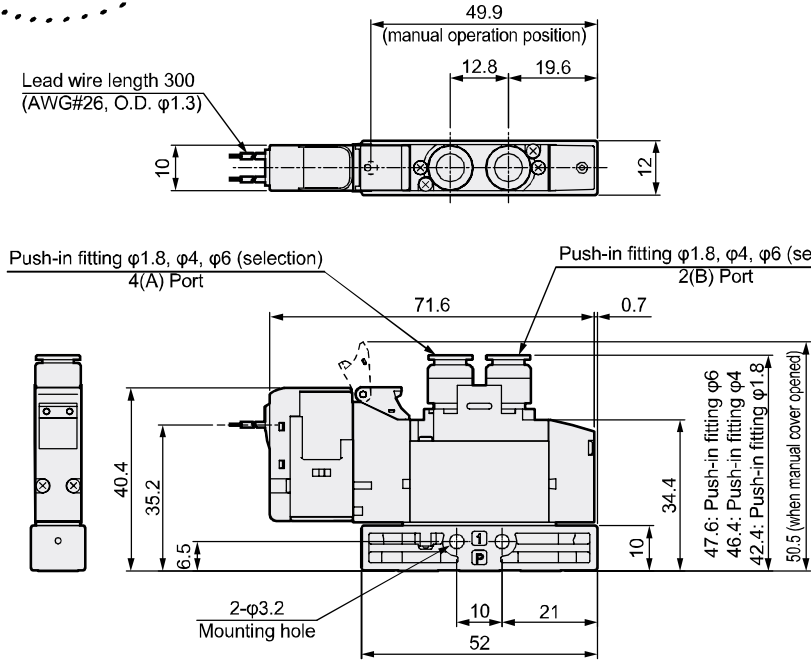
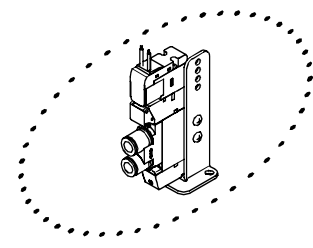
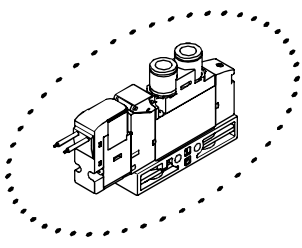


## Dimension diagram 00

4GA110R \* NPT thread and G thread specifications are listed on pages 52 to 59.

● 2-position single grommet lead wire (blank)

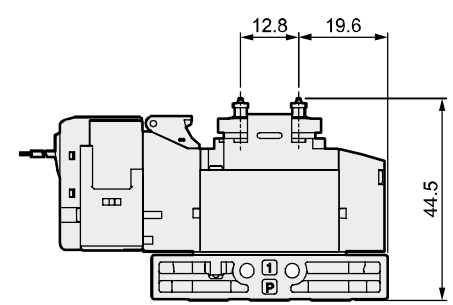
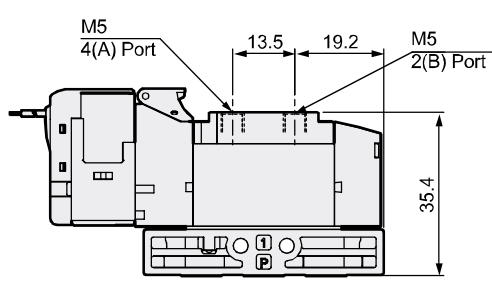
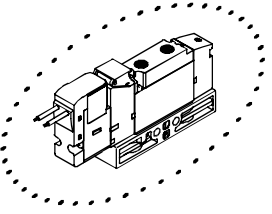
● Mounting plate (P)



Electrical connections	A	B
Grommet lead wire		73.8
E, EJ type connector (upward direction), DC voltage	2.2	82
E, EJ type connector (upward direction), AC voltage		85.5

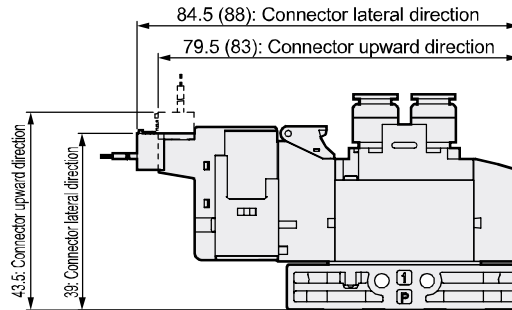
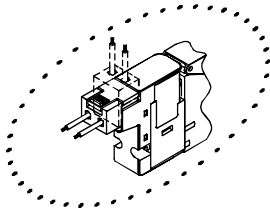
● M5 female thread (M5)

● φ1.8 barbed fitting (CF)



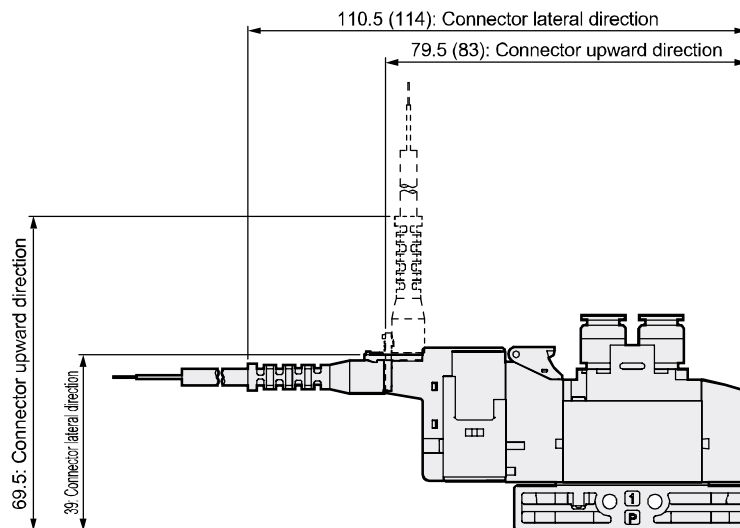
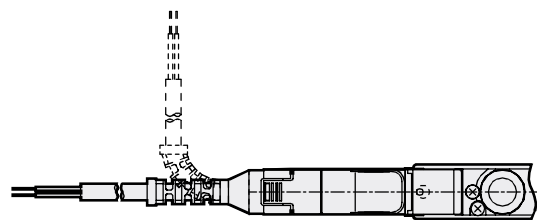
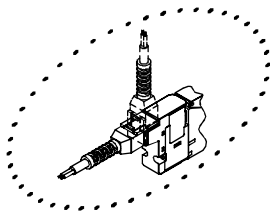
## Dimensions

● E type connector (E)



Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GA1 Series

Single valve; body piping



## 4GA/B Dimensions

M4GA/B 4GA120R \* NPT thread and G thread specifications are listed on pages 52 to 59.

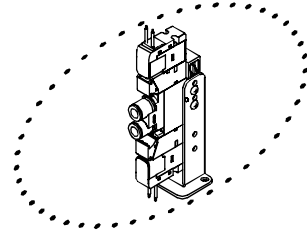
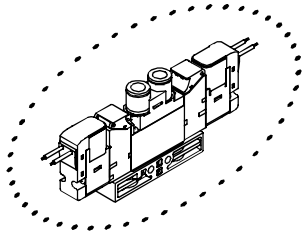
- 2-position double grommet lead wire (blank)

MN4GA/B

4GA/B (mastr) 3GA1660R, 3GA1670R, 3GA1760R, 3GA1770R

- Two 3-port valves integrated grommet lead wire (blank)

- Mounting plate (P)



MN3E  
MN4E

W4GA/B2

W4GB4

4TB

4L2-4/  
LMF0

MN3S0  
MN4S0

4SA/B0

4KA/B

4KA/B  
(mastr)

4F

4F  
(mastr)

PV5G  
GMF

PV5  
GMF

PV5S-0

3QR  
3QB

MV3QR

3MA/B0

3PA/B

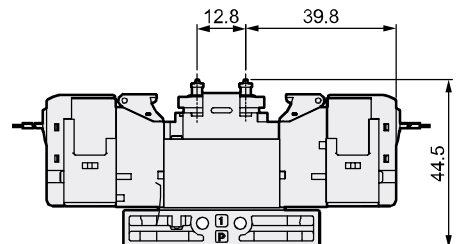
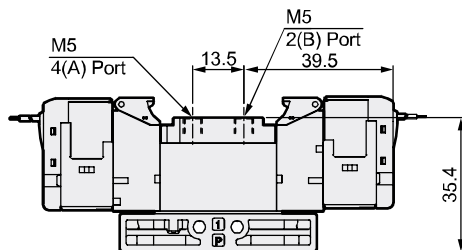
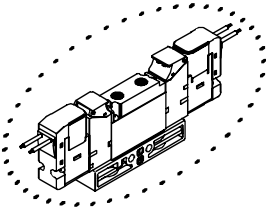
P/M/B

NP/NAP/  
NVP

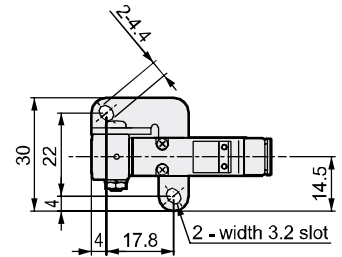
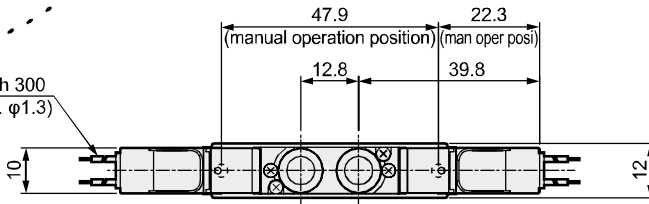
4F\*0EX

- M5 female thread (M5)

- $\phi 1.8$  barbed fitting (CF)

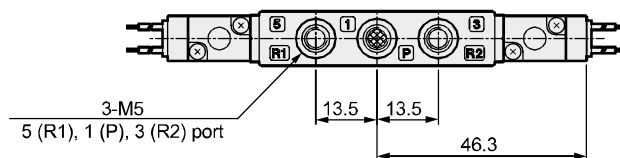
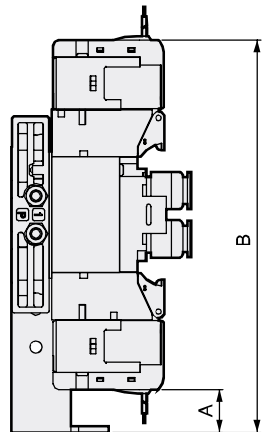
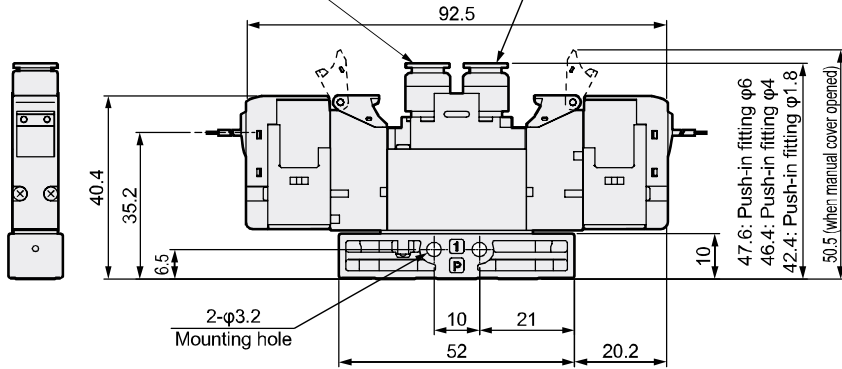


Lead wire length 300  
(AWG#26, O.D.  $\phi 1.3$ )



Push-in fitting  $\phi 1.8, \phi 4, \phi 6$  (selection)  
4(A) port

Push-in fitting  $\phi 1.8, \phi 4, \phi 6$  (selection)  
2(B) port



Electrical connections	A	B
Grommet lead wire	11.3	103.8
E, EJ type connector (upward direction), DC voltage	3	112
E, EJ type connector (upward direction), AC voltage	5	124

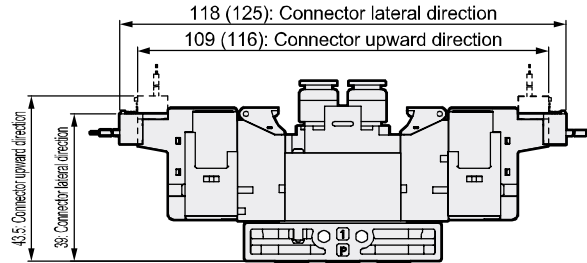
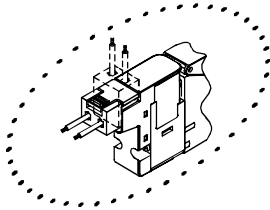
TotAirSys  
(TotalAir)

TotAirSys  
(Gamma)

Ending

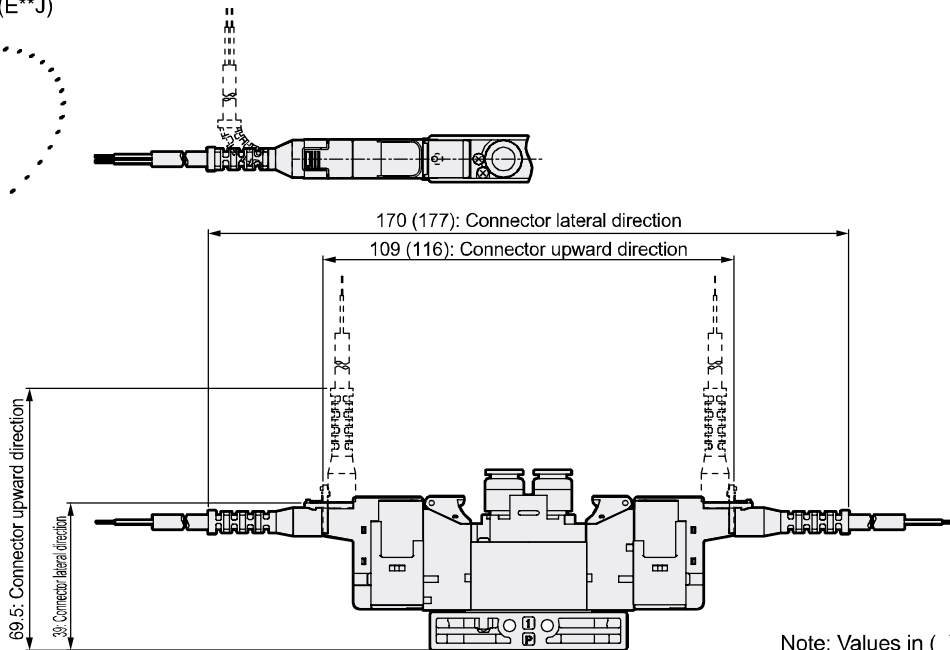
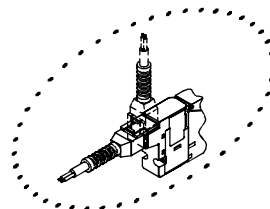
## Dimensions

● E type connector (E)



Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GA1 Series

Single valve; body piping

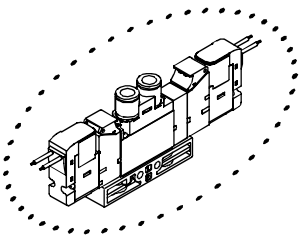
## Dimensions



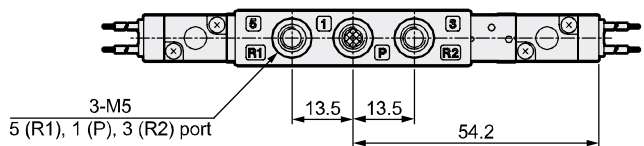
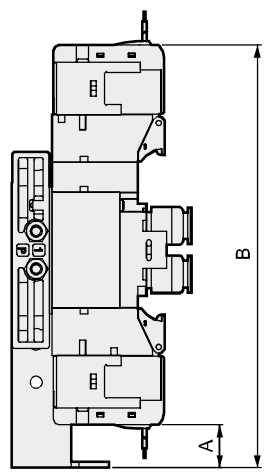
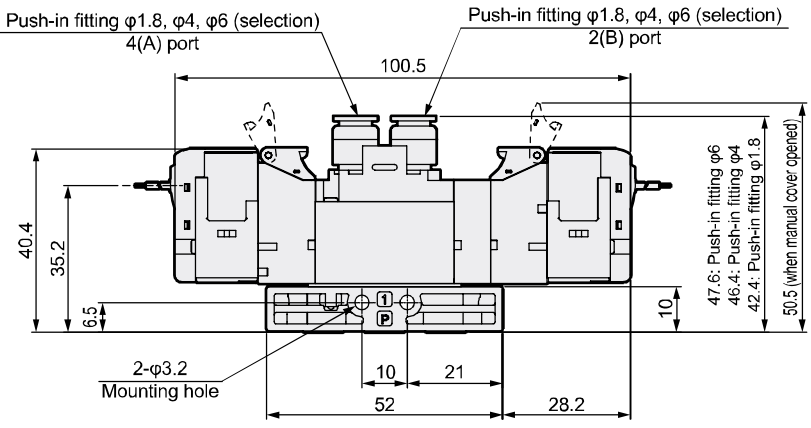
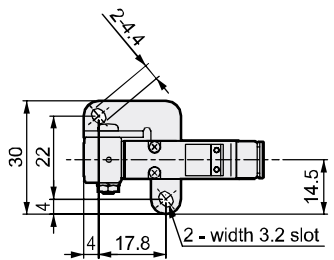
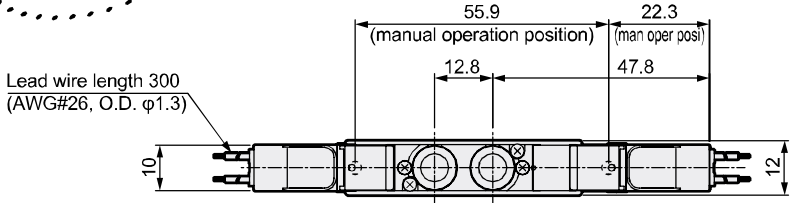
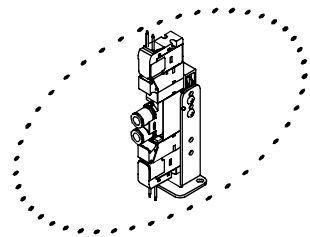
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/ LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/ NVP
- 4F\*0EX
- 4F\*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (TotalAir)
- TotAirSys (Gamma)
- Ending

4GA1<sup>300</sup>0R \* NPT thread and G thread specifications are listed on pages 52 to 59.

● 3-position grommet lead wire (blank)

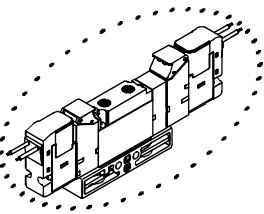


● Mounting plate (P)

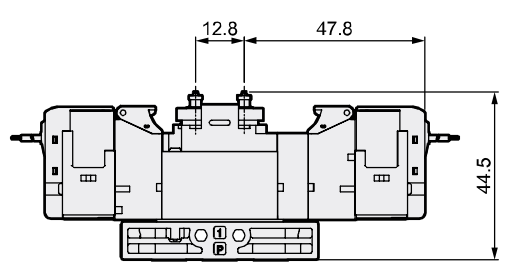
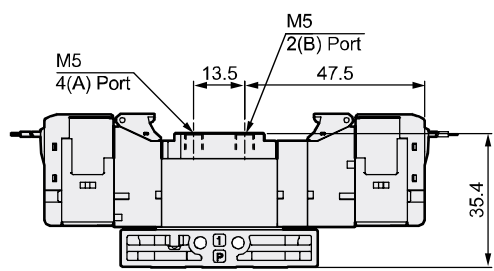


Electrical connections	A	B
Grommet lead wire	11.3	111.8
E, EJ type connector (upward direction), DC voltage	3	120
E, EJ type connector (upward direction), AC voltage	5	132

● M5 female thread (M5)



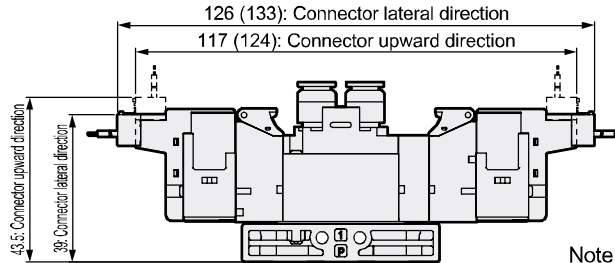
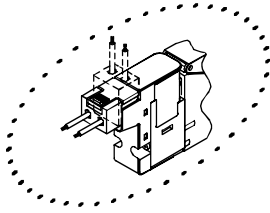
● φ1.8 barbed fitting (CF)





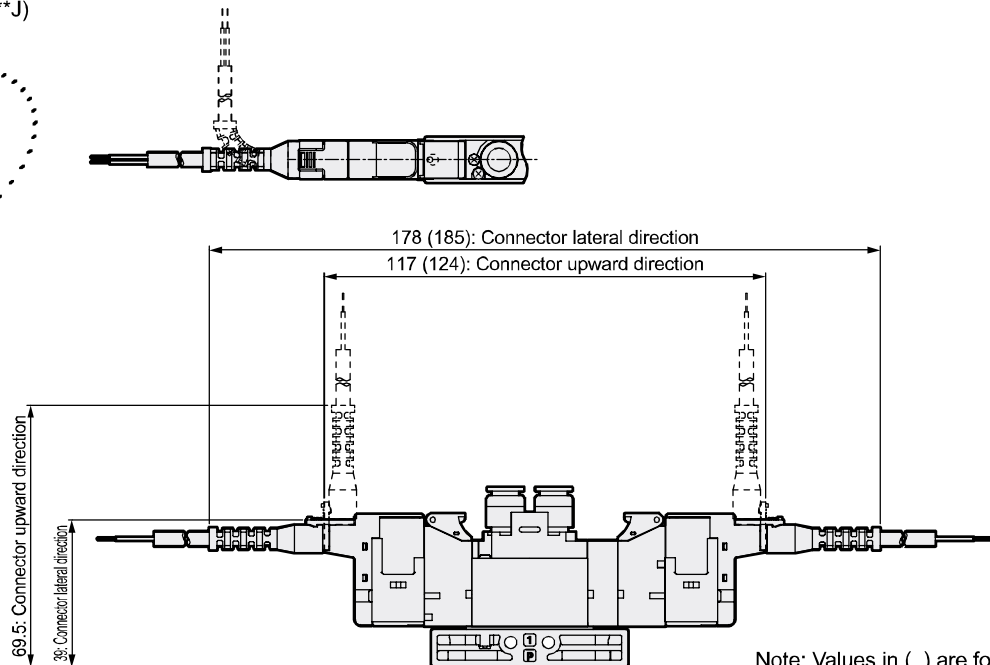
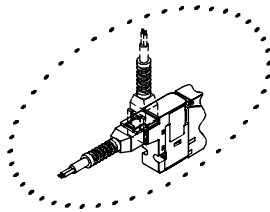
## Dimensions

● E type connector (E)



Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GA2 Series

Single valve; body piping

## Dimensions

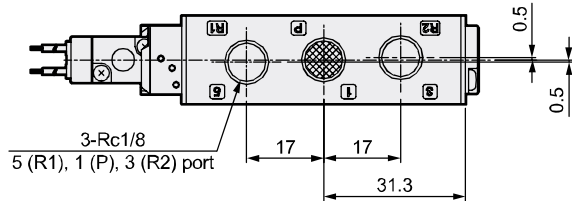
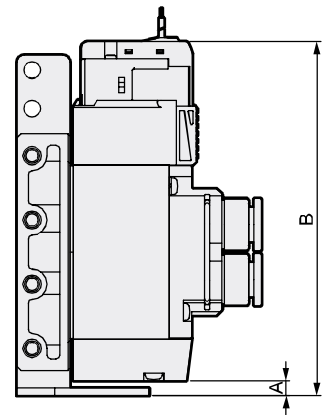
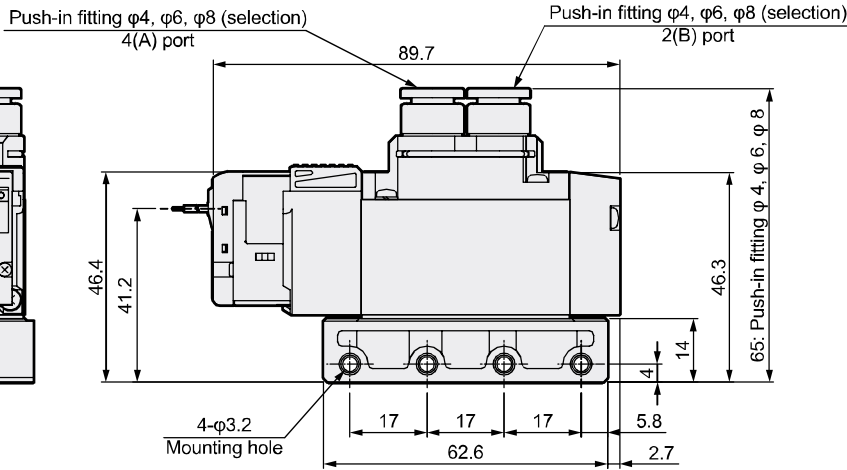
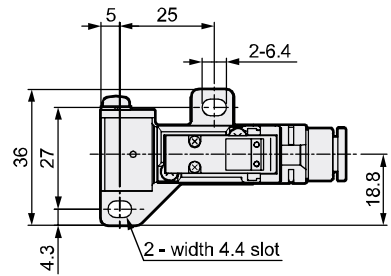
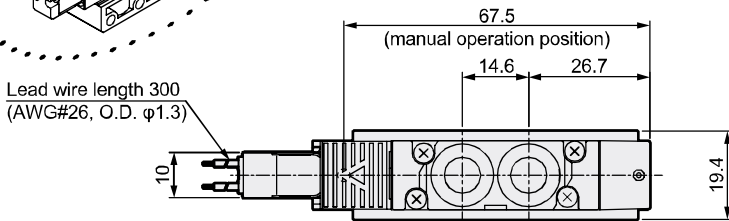
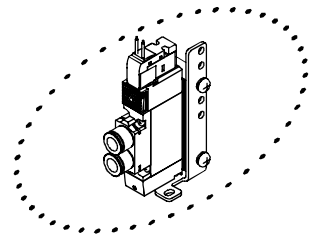
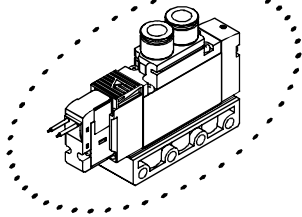


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F\*0EX
- 4F\*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (TotalAir)
- TotAirSys (Gamma)
- Ending

4GA210R \* NPT thread and G thread specifications are listed on pages 52 to 59.

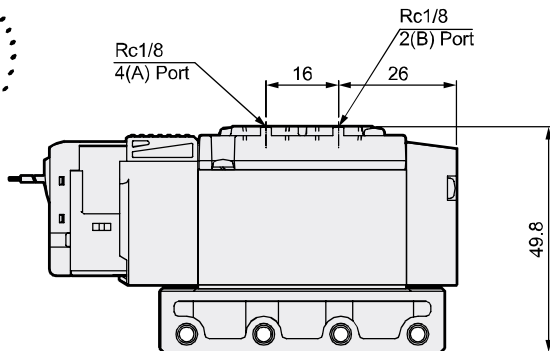
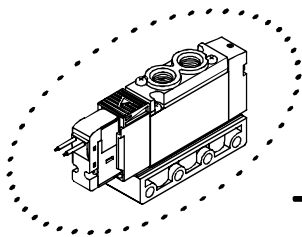
● 2-position single grommet lead wire (blank)

● Mounting plate (P)



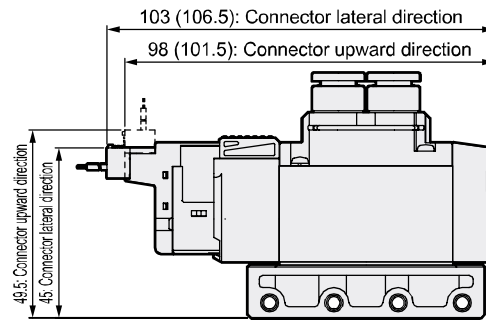
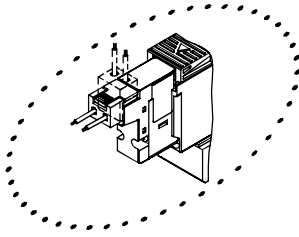
Electrical connections	A	B
Grommet lead wire	4	93.7
E, EJ type connector (upward direction), DC voltage		102
E, EJ type connector (upward direction), AC voltage		105.5
DIN terminal box (inner direction)		112.7

● Rc1/8 female thread (06)



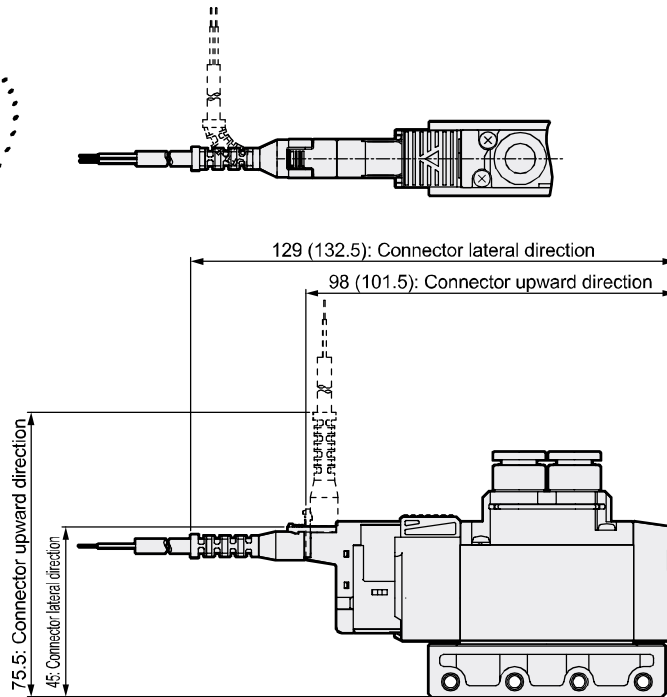
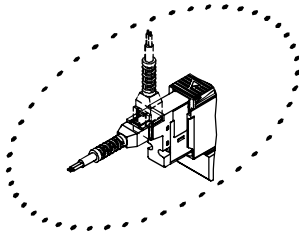
## Dimensions

● E type connector (E)



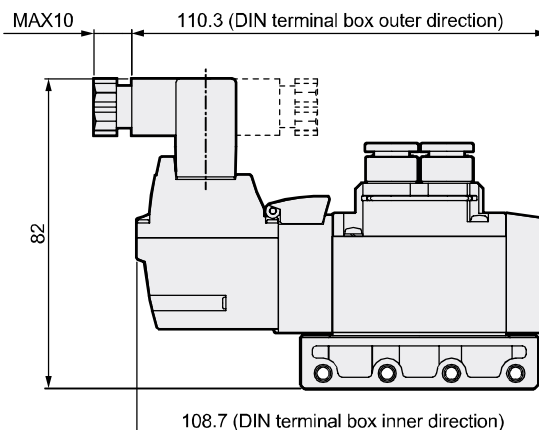
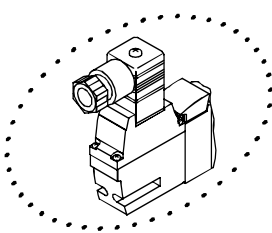
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GA2 Series

Single valve; body piping

## Dimensions



- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E  
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/  
LMF0
- MN3S0  
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G  
GMF
- PV5  
GMF
- PV5S-0
- 3QR  
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/  
NVP
- 4F\*0EX
- 4F\*0E
- HMV  
HSV
- 2QV  
3QV
- SKH
- PCD
- Slencer
- TotAirSys  
(TotalAir)
- TotAirSys  
(Gamma)
- Ending

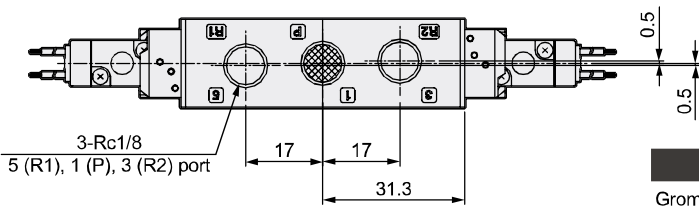
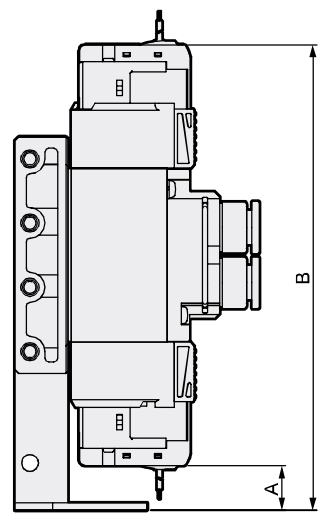
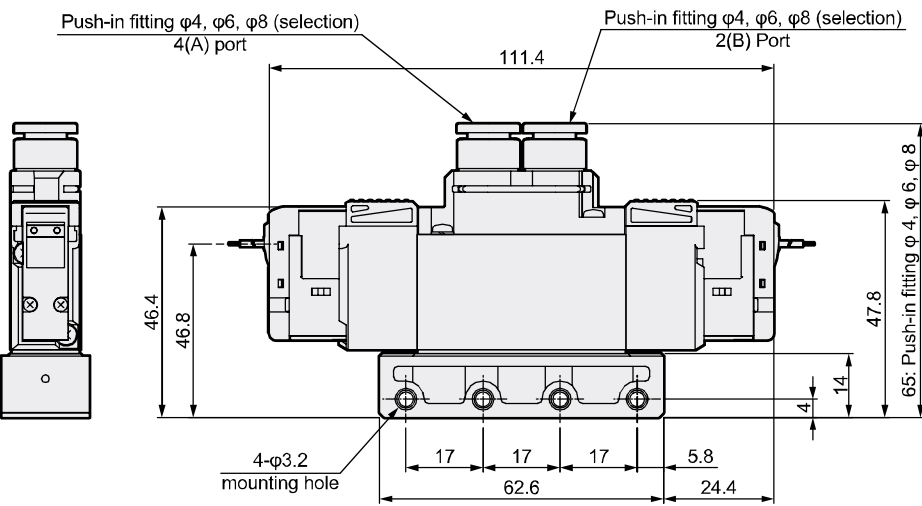
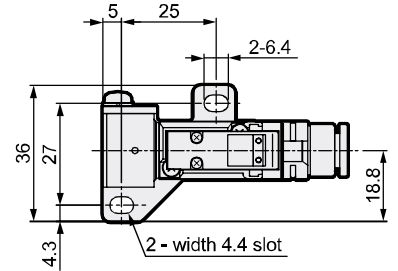
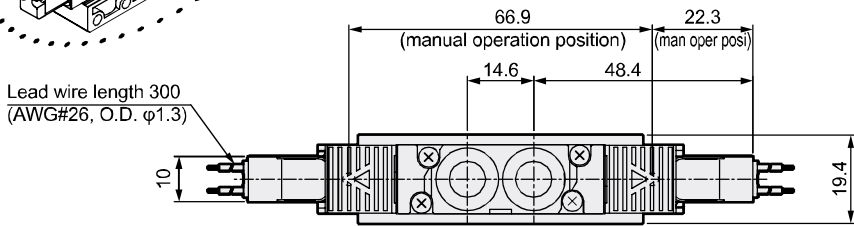
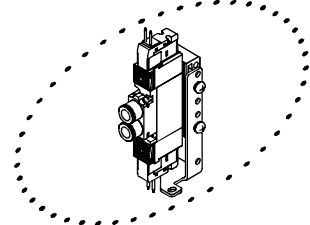
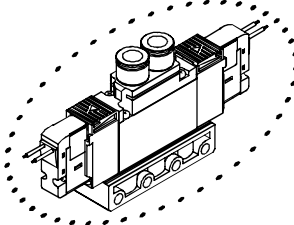
4GA220R \* NPT thread and G thread specifications are listed on pages 52 to 59.

● 2-position double grommet lead wire (blank)

3GA2660R, 3GA2670R, 3GA2760R, 3GA2770R

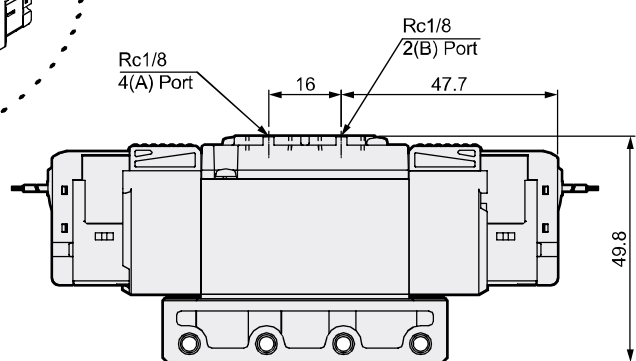
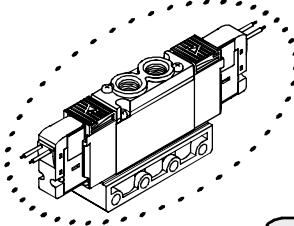
● Two 3-port valves integrated grommet lead wire (blank)

● Mounting plate (P)



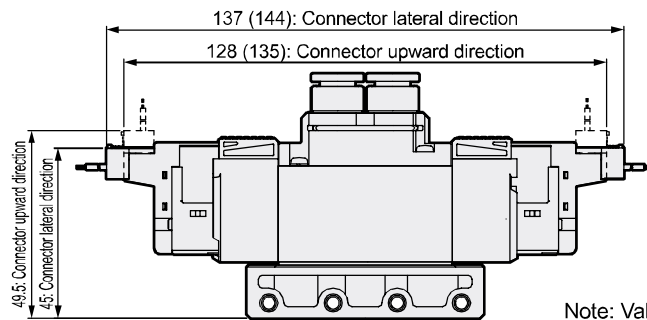
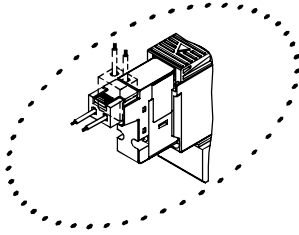
Electrical connections	A	B
Grommet lead wire	11.8	123.2
E, EJ type connector (upward direction), DC voltage	3.5	131.5
E, EJ type connector (upward direction), AC voltage	10.5	148.5
DIN terminal box (inner direction)	3	152.4

● Rc1/8 female thread (06)



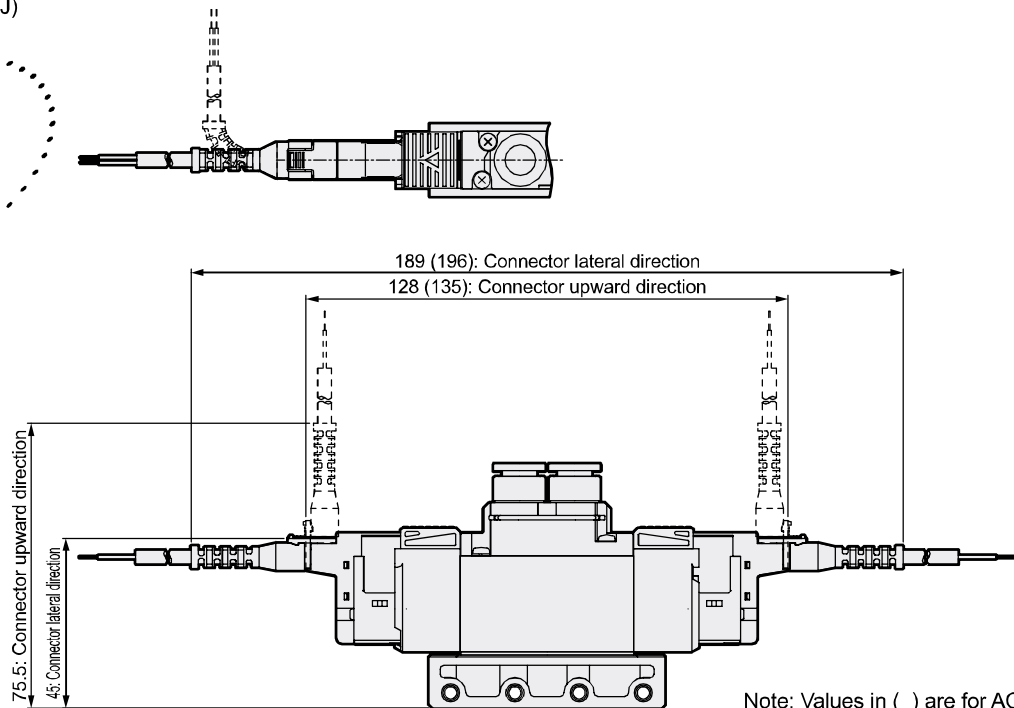
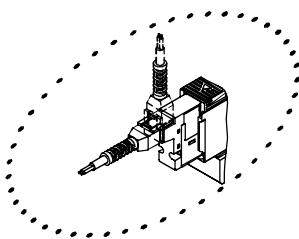
## Dimensions

● E type connector (E)



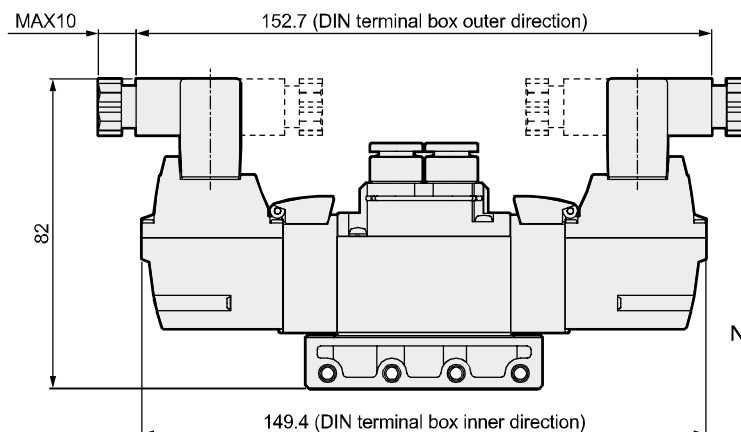
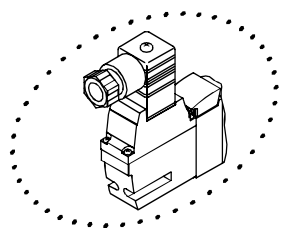
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GA2 Series

Single valve; body piping

## Dimensions

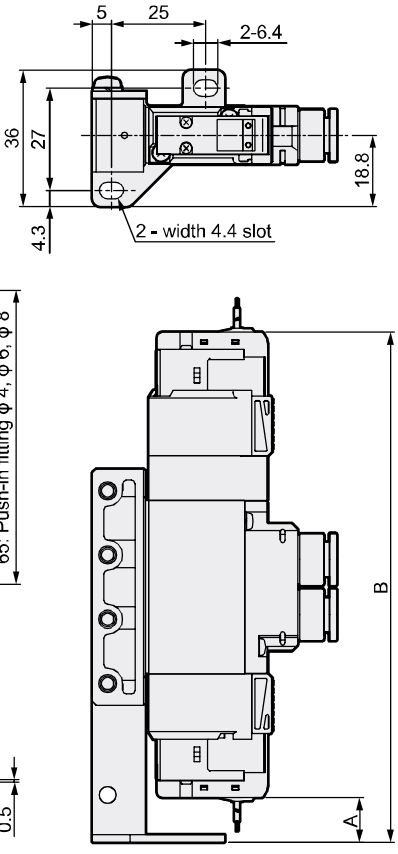
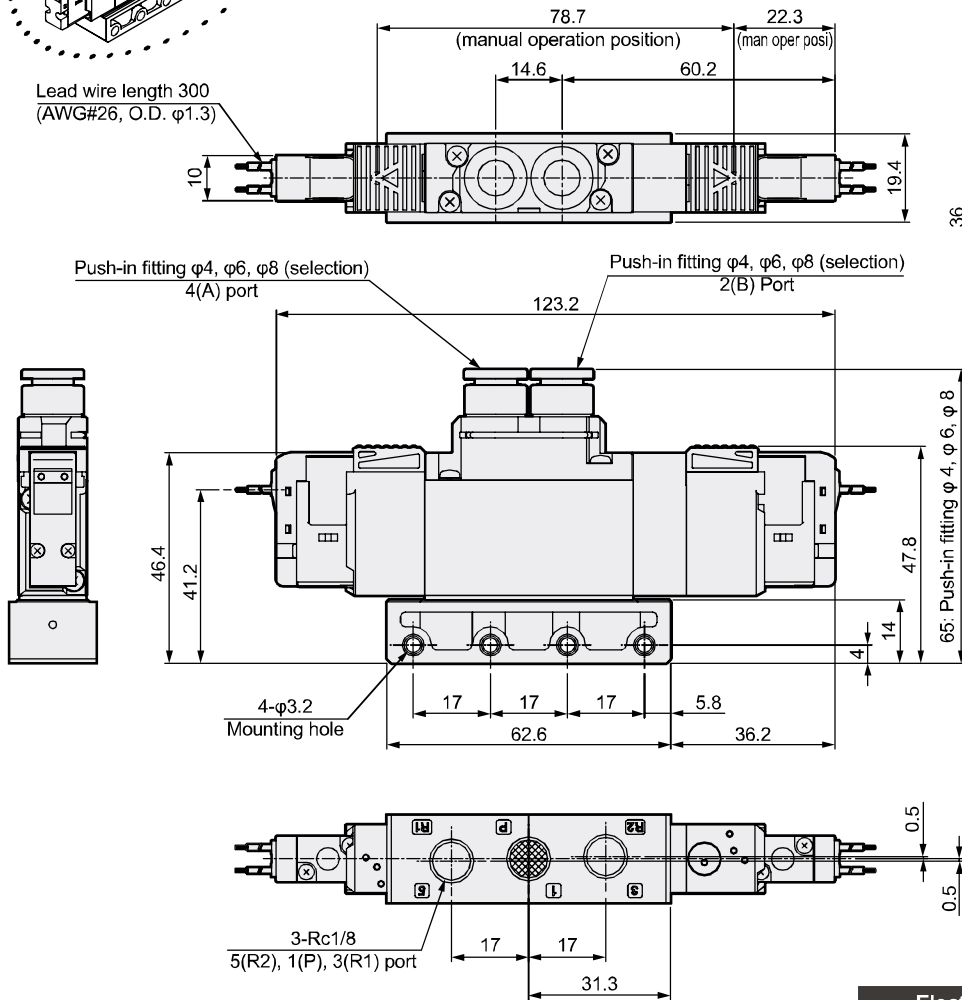
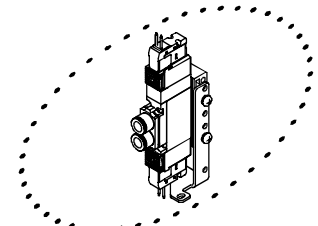
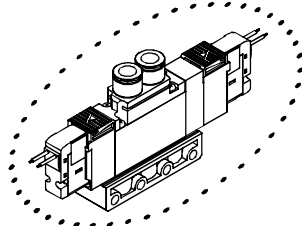


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E  
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/  
LMF0
- MN3S0  
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G  
GMF
- PV5  
GMF
- PV5S-0
- 3QR  
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/  
NVP
- 4F\*0EX
- 4F\*0E
- HMV  
HSV
- 2QV  
3QV
- SKH
- PCD
- Silencer
- TotAirSys  
(TotalAir)
- TotAirSys  
(Gamma)
- Ending

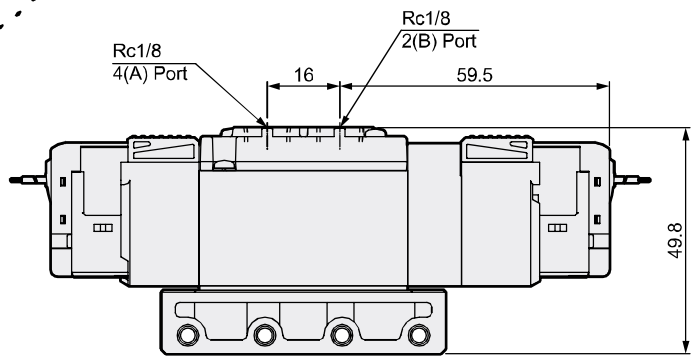
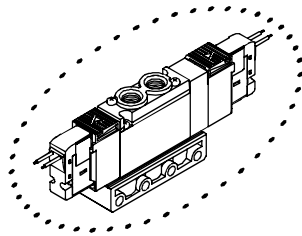
4GA2  $\frac{3}{4}$  OR \* NPT thread and G thread specifications are listed on pages 52 to 59.

● 3-position grommet lead wire (blank)

● Mounting plate (P)



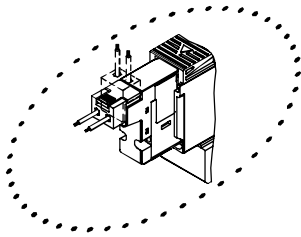
● Rc1/8 female thread (06)



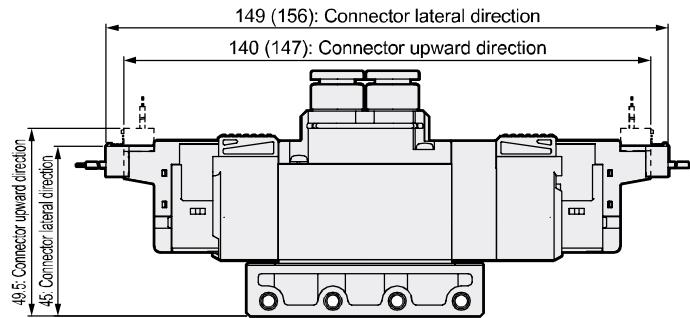
Electrical connections	A	B
Grommet lead wire	11.8	135
E, EJ type connector (upward direction), DC voltage	3.5	143
E, EJ type connector (upward direction), AC voltage	10.5	160.5
DIN terminal box (inner direction)	3	164.2

## Dimensions

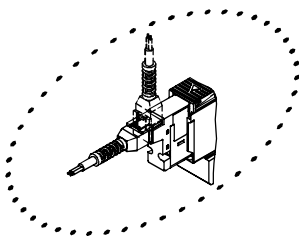
● E type connector (E)



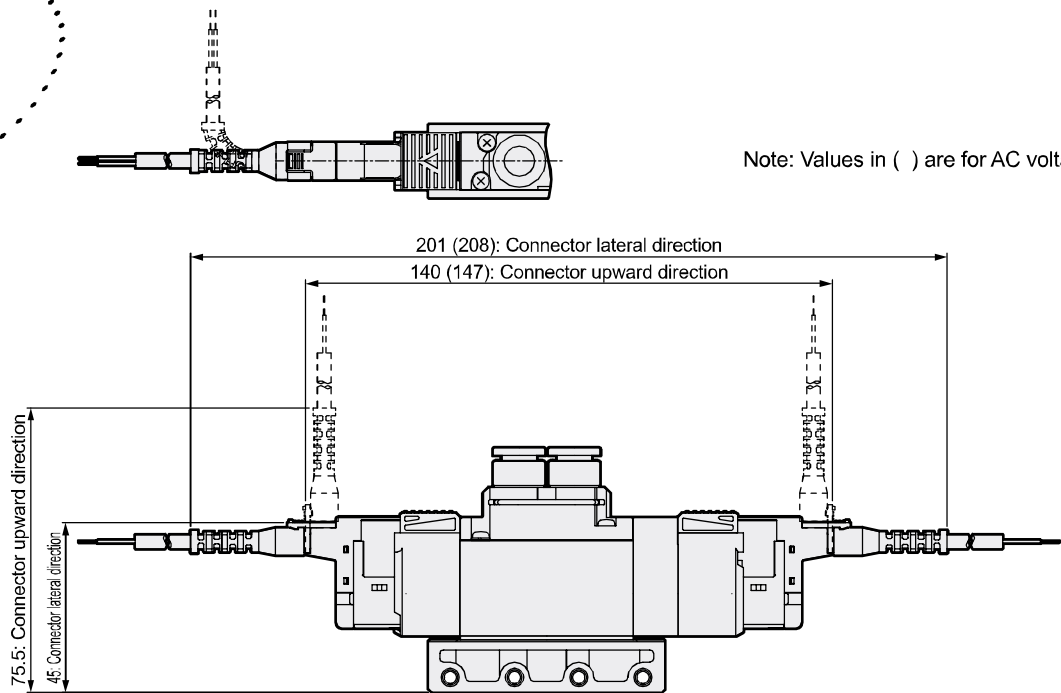
Note: Values in ( ) are for AC voltage.



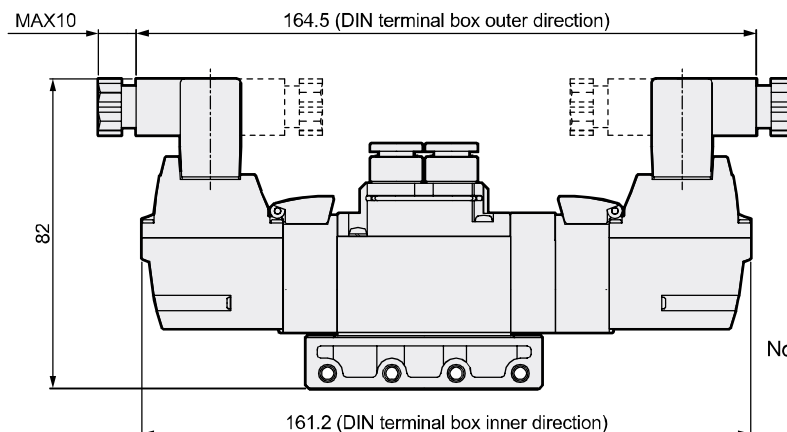
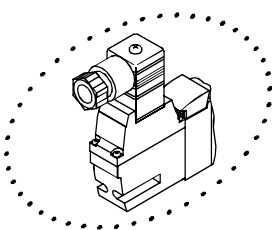
● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.



● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GA3 Series

Single valve; body piping

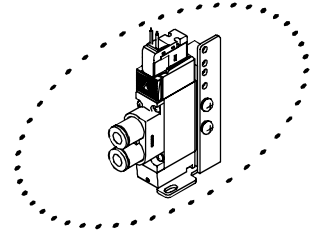
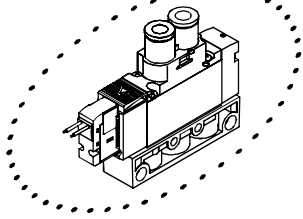


## 4GA/B Dimensions

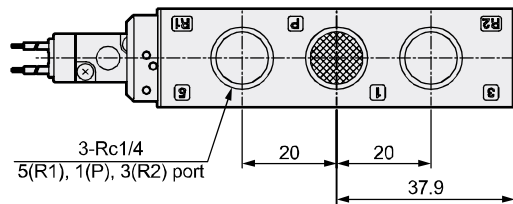
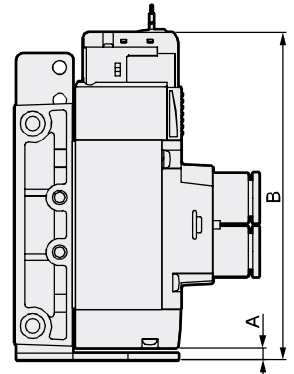
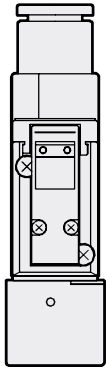
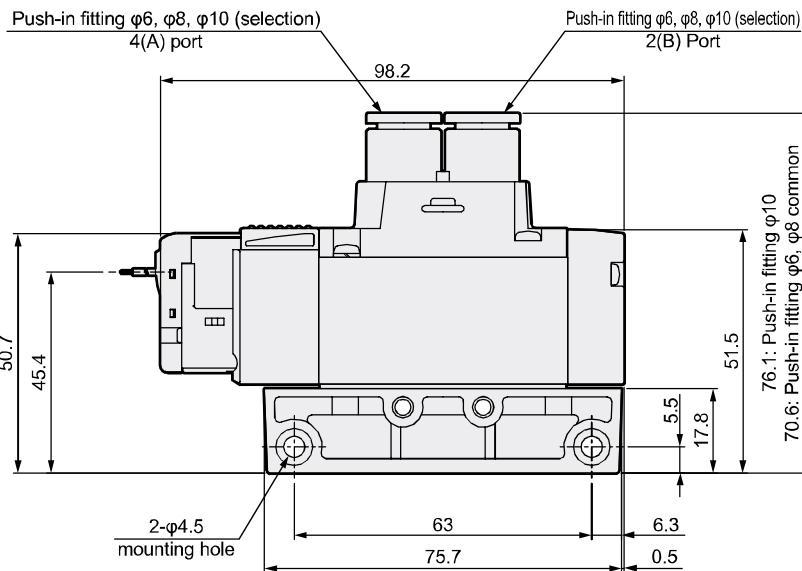
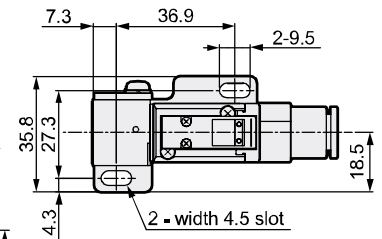
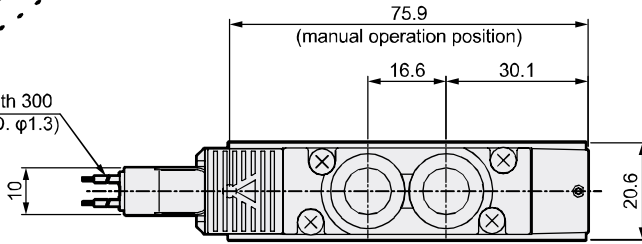
4GA310R \* NPT thread and G thread specifications are listed on pages 52 to 59.

● 2-position single grommet lead wire (blank)

● Mounting plate (P)

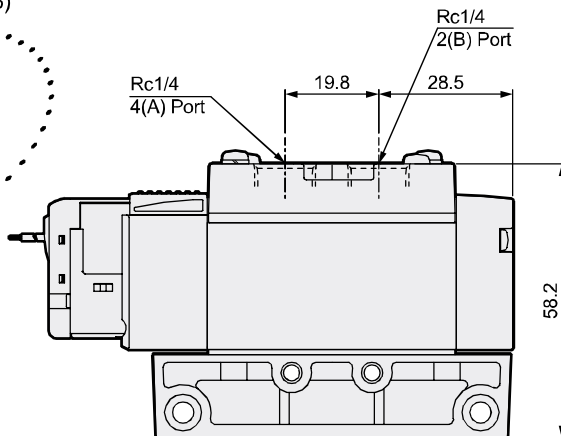
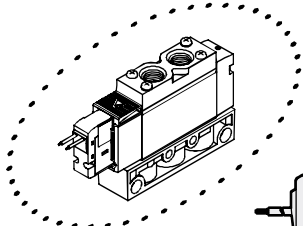


Lead wire length 300  
(AWG#26, O.D.  $\phi 1.3$ )



Electrical connections	A	B
Grommet lead wire		101.8
E, EJ type connector (upward direction), DC voltage	3.7	110
E, EJ type connector (upward direction), AC voltage		113.5
DIN terminal box (inner direction)		120.9

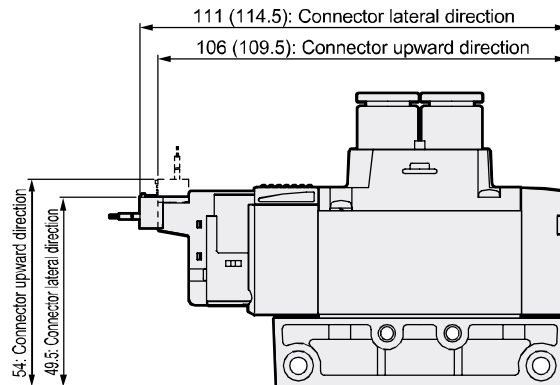
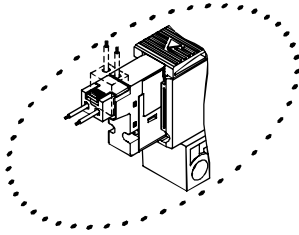
● Rc1/4 female thread (08)





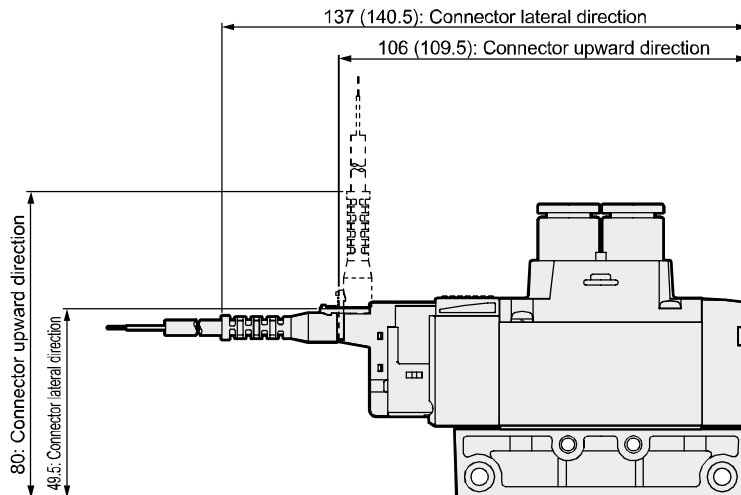
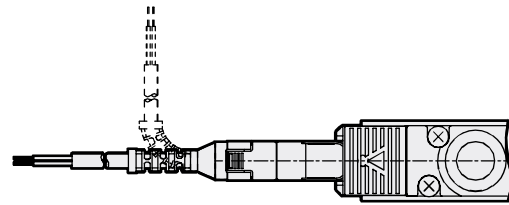
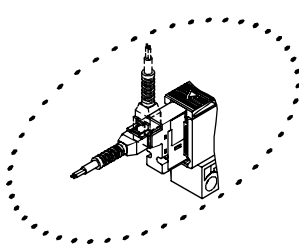
## Dimensions

● E type connector (E)



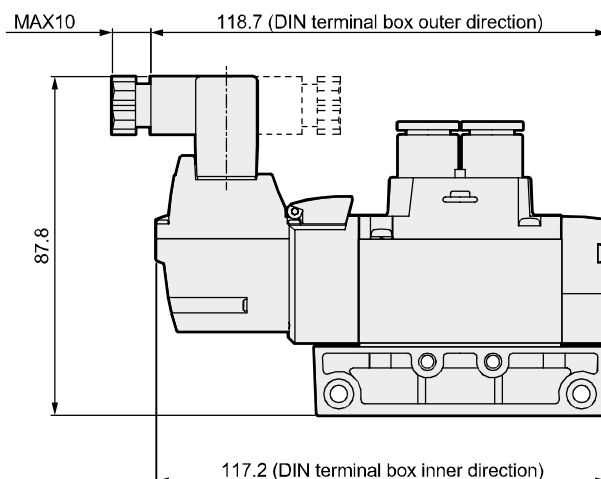
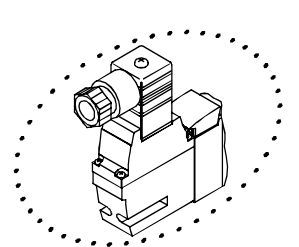
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GA3 Series

Single valve; body piping

## Dimensions

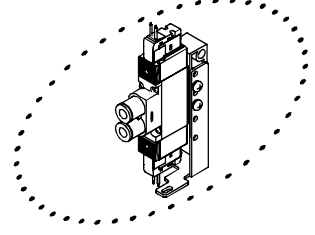
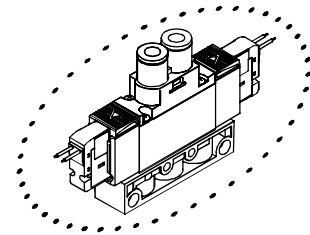


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F\*0EX
- 4F\*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Slencer
- TotAirSys (TotalAir)
- TotAirSys (Gamma)
- Ending

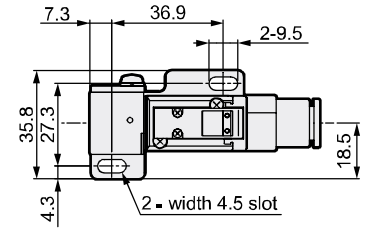
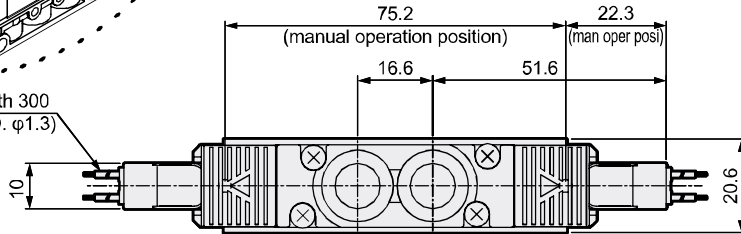
4GA320R \* NPT thread and G thread specifications are listed on pages 52 to 59.

● 2-position double grommet lead wire (blank)

● Mounting plate (P)

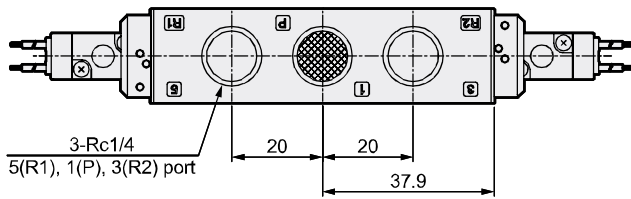
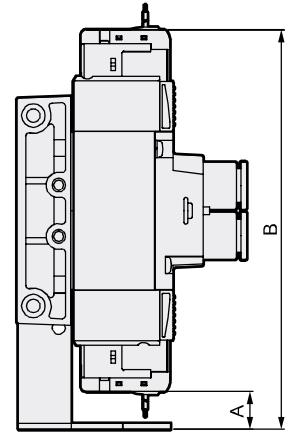
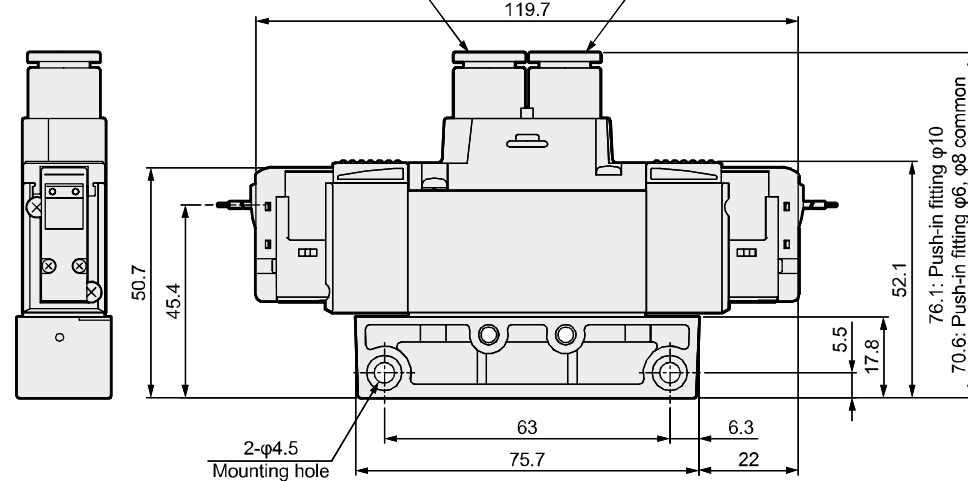


Lead wire length 300  
(AWG#26, O.D. φ1.3)



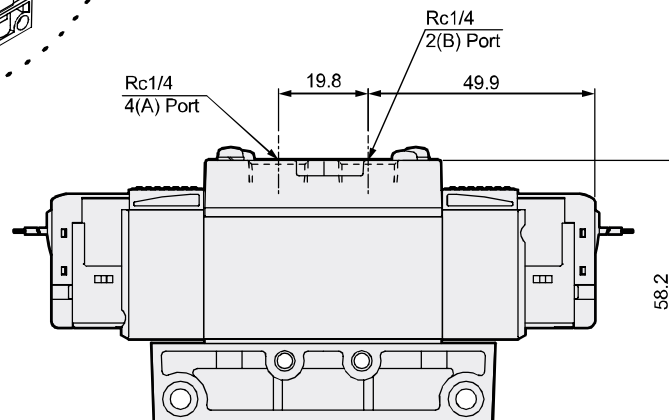
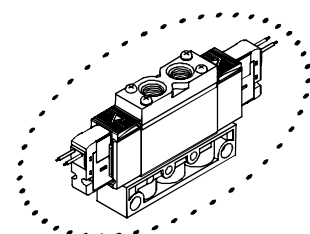
Push-in fitting φ6, φ8, φ10 (selection)  
4(A) port

Push-in fitting φ6, φ8, φ10 (selection)  
2(B) port



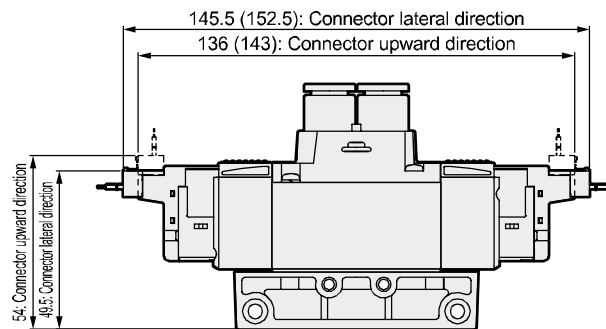
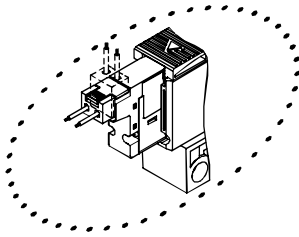
Electrical connections	A	B
Grommet lead wire	12.6	132.2
E, EJ type connector (upward direction), DC voltage	4.5	140.5
E, EJ type connector (upward direction), AC voltage	11	157.5
DIN terminal box (inner direction)	3.7	161.4

● Rc1/4 female thread (08)



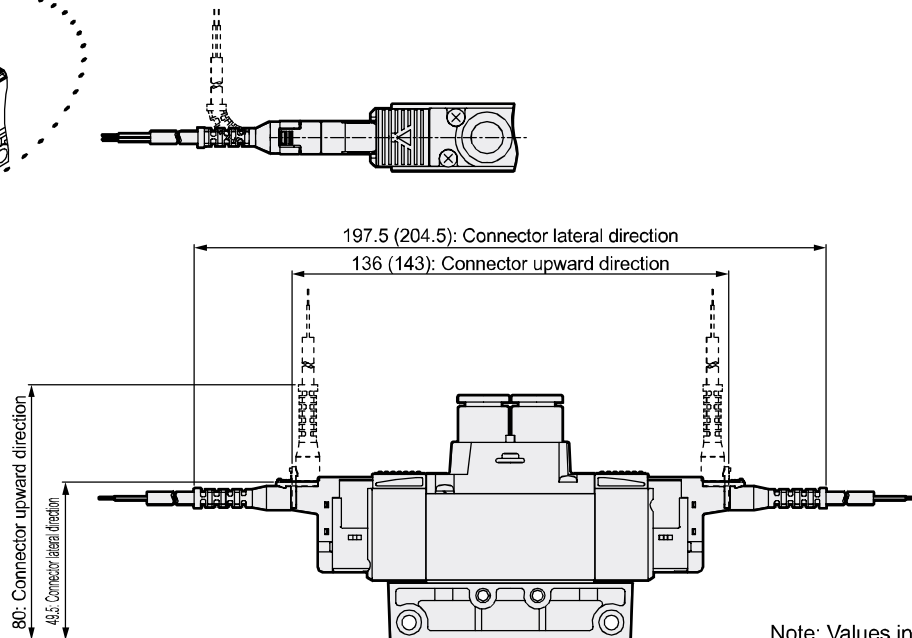
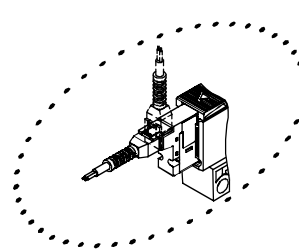
## Dimensions

### ● E type connector (E)



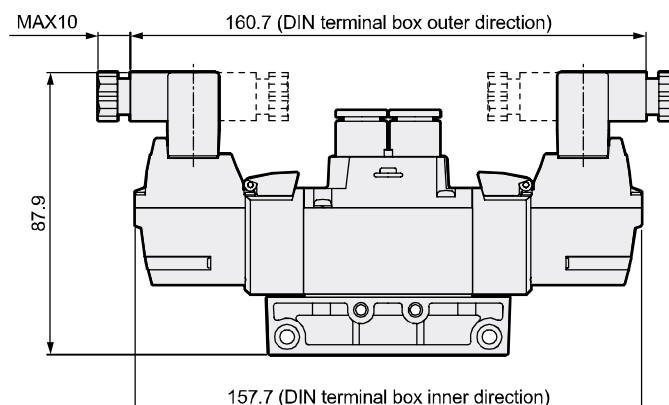
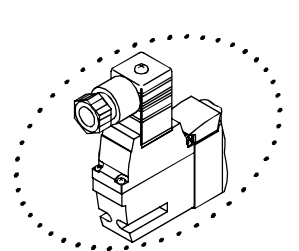
Note: Values in ( ) are for AC voltage.

### ● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

### ● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GA3 Series

Single valve; body piping

## Dimensions

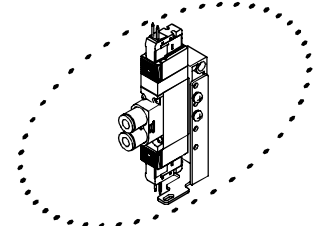
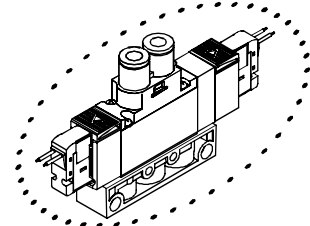


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F\*0EX
- 4F\*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (TotalAir)
- TotAirSys (Gamma)
- Ending

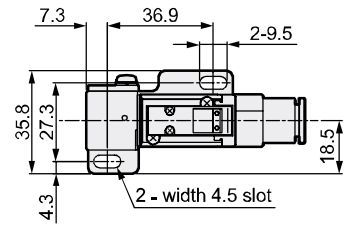
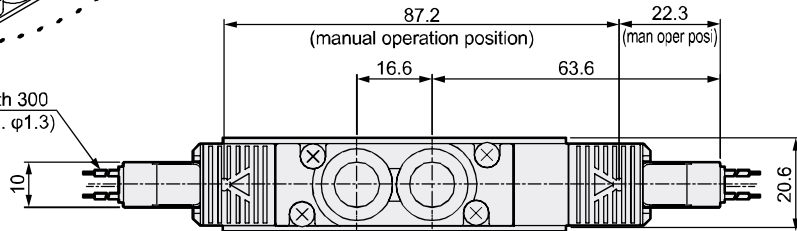
4GA3  $\frac{3}{8}$  OR \* NPT thread and G thread specifications are listed on pages 52 to 59.

● 3-position grommet lead wire (blank)

● Mounting plate (P)

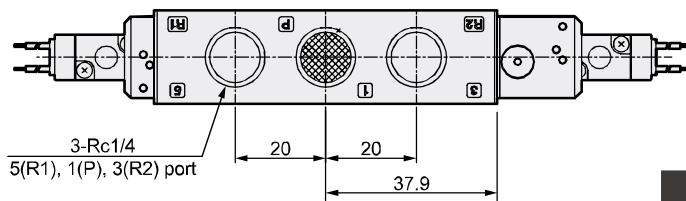
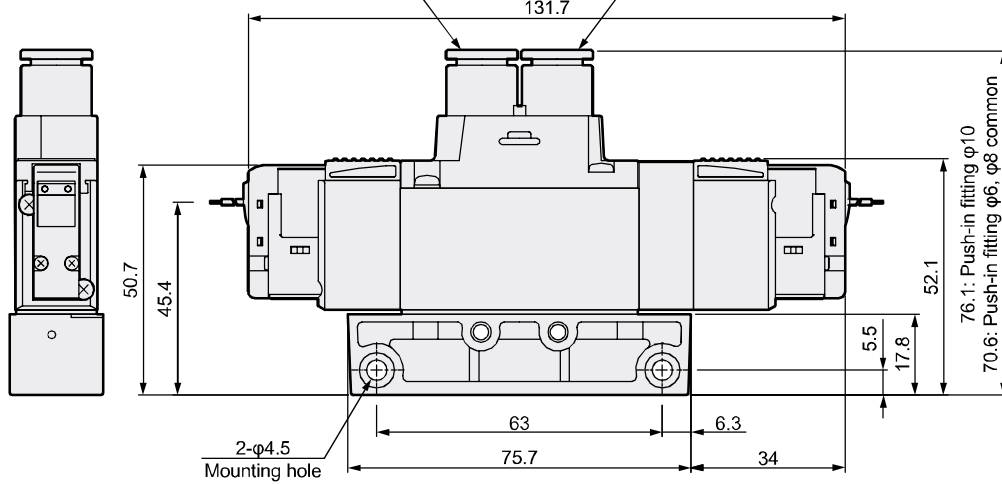


Lead wire length 300 (AWG#26, O.D.  $\phi$ 1.3)



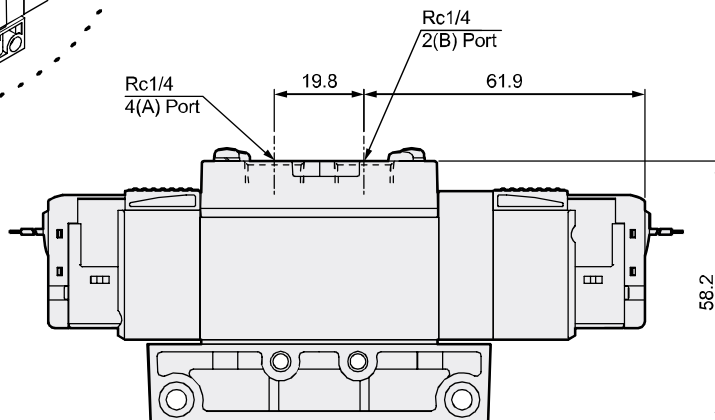
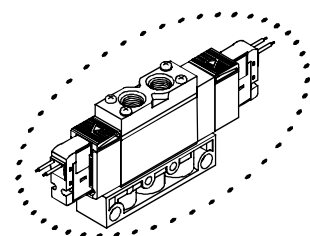
Push-in fitting  $\phi$ 6,  $\phi$ 8,  $\phi$ 10 (selection)  
4(A) Port

Push-in fitting  $\phi$ 6,  $\phi$ 8,  $\phi$ 10 (selection)  
2(B) Port



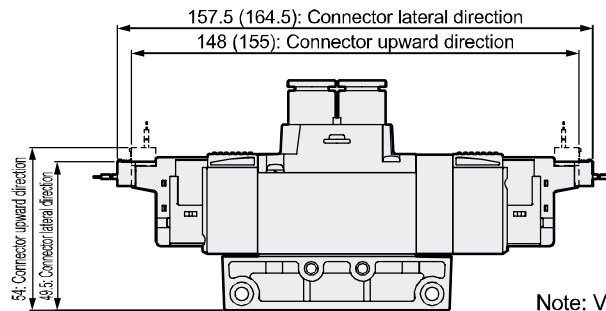
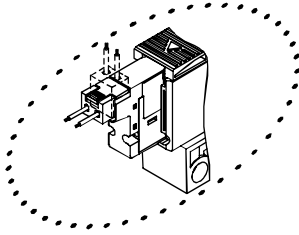
Electrical connections	A	B
Grommet lead wire	12.6	144.3
E, EJ type connector (upward direction), DC voltage	4.5	152.5
E, EJ type connector (upward direction), AC voltage	11	169.5
DIN terminal box (inner direction)	3.7	173.4

● Rc1/4 female thread (08)



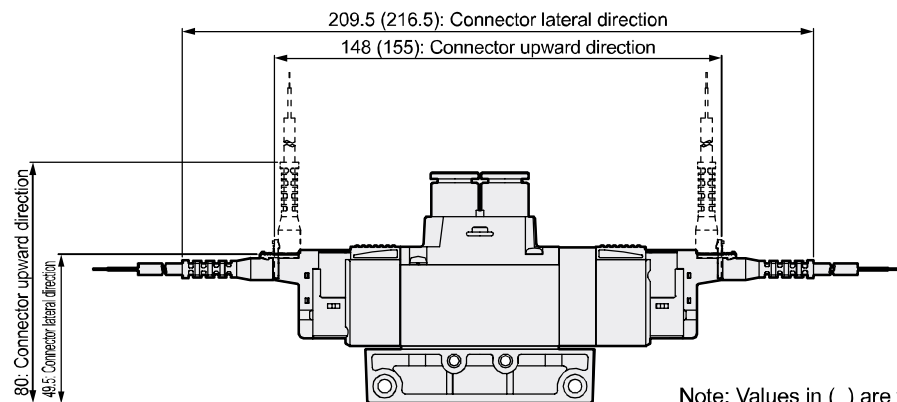
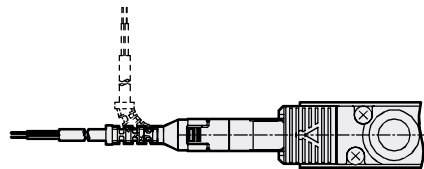
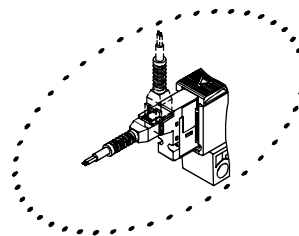
## Dimensions

● E type connector (E)



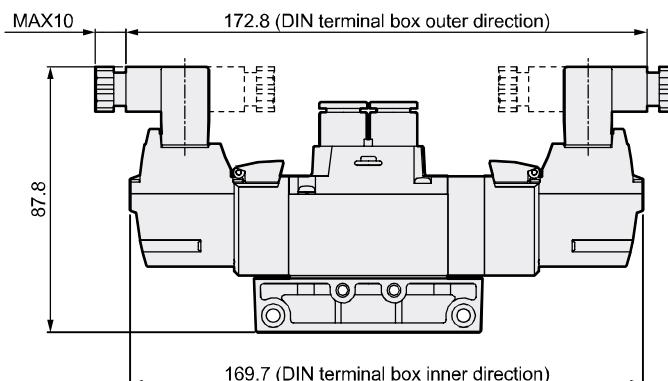
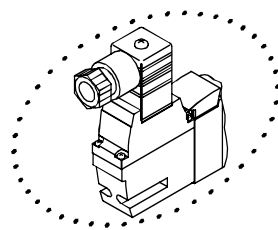
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 3GA1/4GA1 Series

Single valve; body piping

Dimensions Port size; NPT thread

4GA/B

M4GA/B

MN4GA/B

4GA/B (mastr)

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E  
MN4E

W4GA/B2

W4GB4

4TB

4L2-4/  
LMF0

MN3S0  
MN4S0

4SA/B0

4KA/B

4KA/B (mastr)

4F

4F (mastr)

PV5G  
GMF

PV5  
GMF

PV5S-0

3QR  
3QB

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP/  
NVP

4F\*0EX

4F\*0E

HMV

HSV

2QV  
3QV

SKH

PCD

Silencer

TotAirSys  
(TotalAir)

TotAirSys  
(Gamma)

Ending

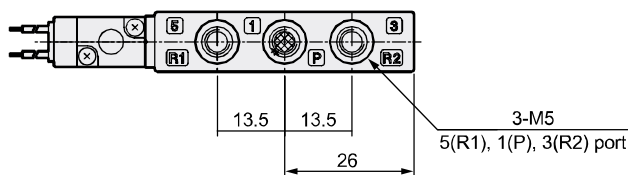
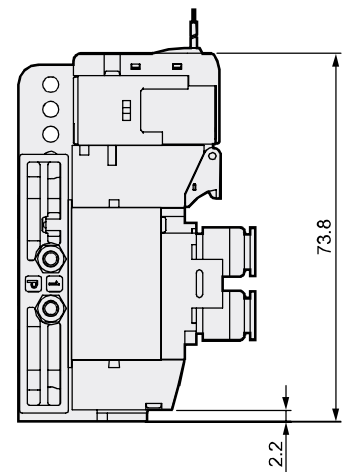
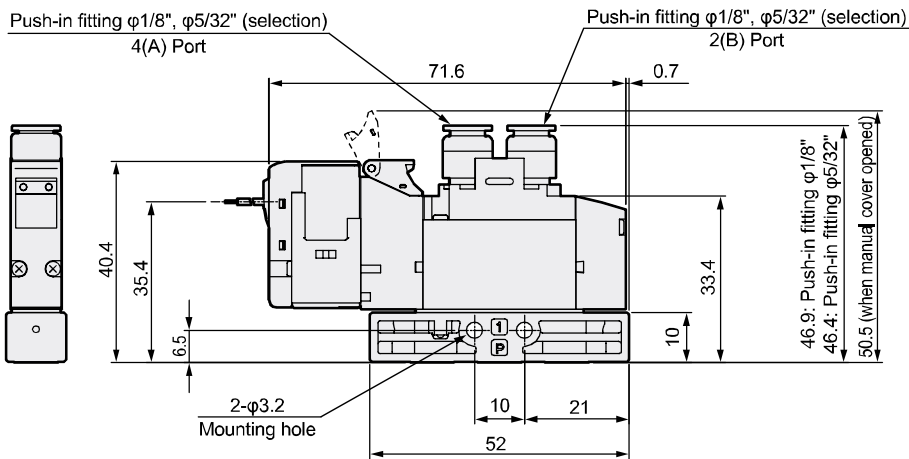
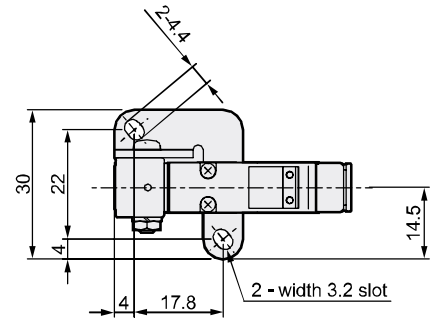
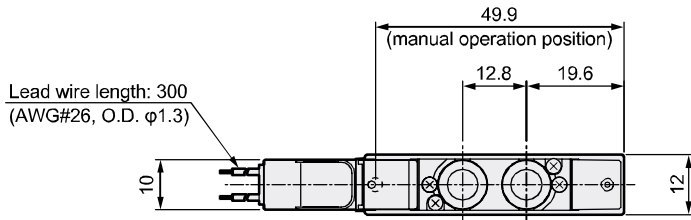
3GA1 0R, 4GA1 0R

1  
11  
66  
67  
76  
77

1  
4  
5

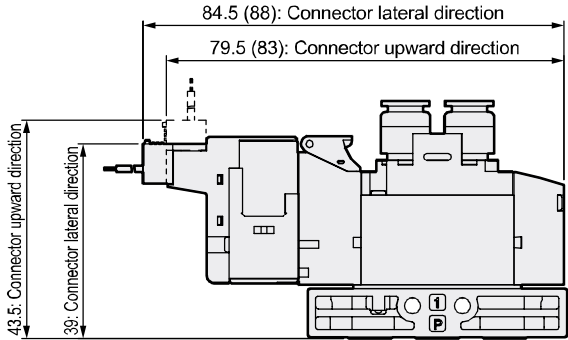
● 2-position single grommet lead wire (blank)

● Mounting plate (P)



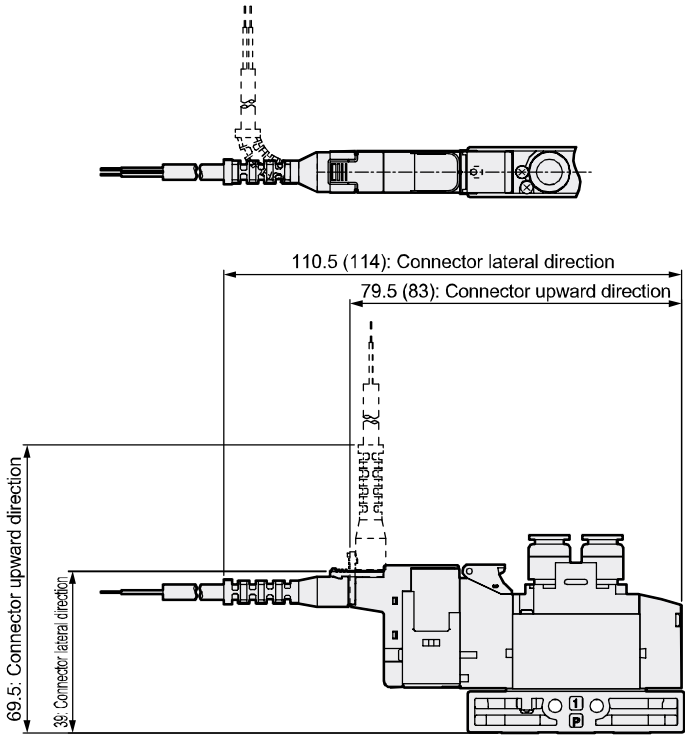
## Dimensions Port size; NPT thread

● E type connector (E)



Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 3GA2/4GA2 Series

Single valve; body piping

Dimensions Port size; NPT thread

4GA/B

M4GA/B

MN4GA/B

4GA/B (mastr)

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E  
MN4E

W4GA/B2

W4GB4

4TB

4L2-4/  
LMF0

MN3S0  
MN4S0

4SA/B0

4KA/B

4KA/B (mastr)

4F

4F (mastr)

PV5G  
GMF

PV5  
GMF

PV5S-0

3QR  
3QB

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP/  
NVP

4F\*0EX

4F\*0E

HMV  
HSV

2QV  
3QV

SKH

PCD

Silencer

TotAirSys  
(TotalAir)

TotAirSys  
(Gamma)

Ending

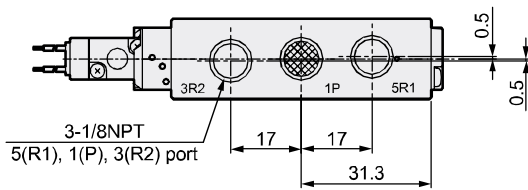
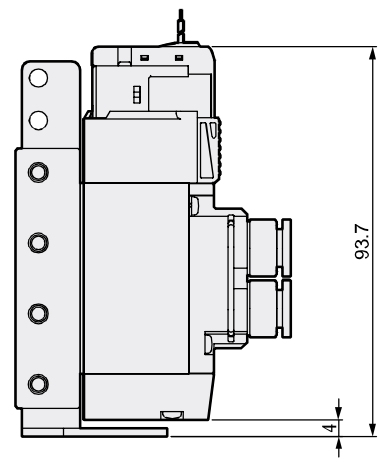
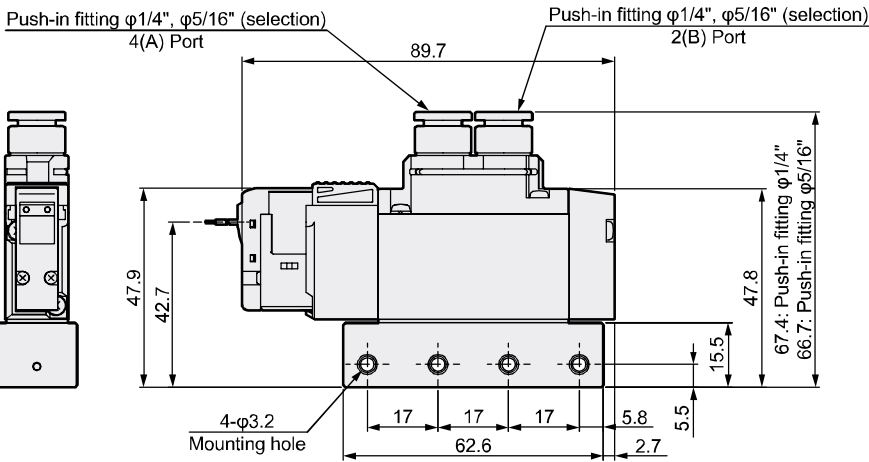
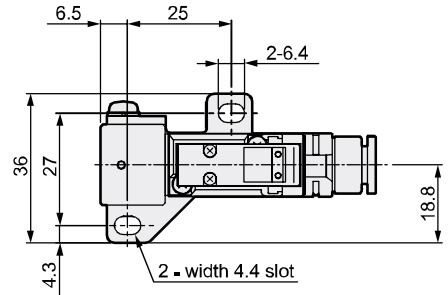
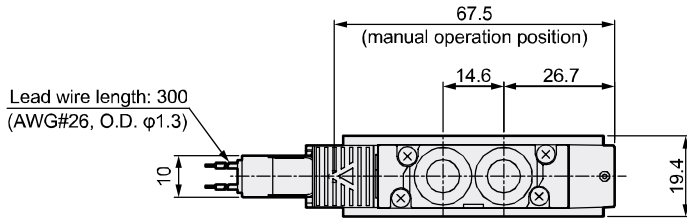
3GA2<sup>1</sup><sub>0R</sub>, 4GA2<sup>1</sup><sub>OR</sub>

<sup>1</sup><sub>0R</sub>  
<sup>1</sup><sub>0R</sub>  
<sup>1</sup><sub>0R</sub>  
<sup>1</sup><sub>0R</sub>  
<sup>1</sup><sub>0R</sub>

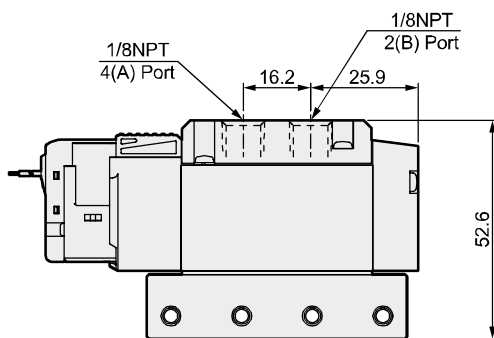
<sup>1</sup><sub>OR</sub>  
<sup>1</sup><sub>OR</sub>  
<sup>1</sup><sub>OR</sub>  
<sup>1</sup><sub>OR</sub>  
<sup>1</sup><sub>OR</sub>

● 2-position single grommet lead wire (blank)

● Mounting plate (P)



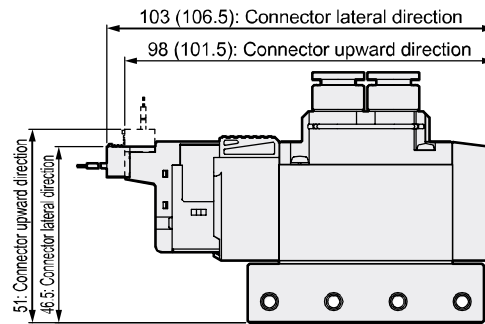
● 1/8NPT female thread (06N)





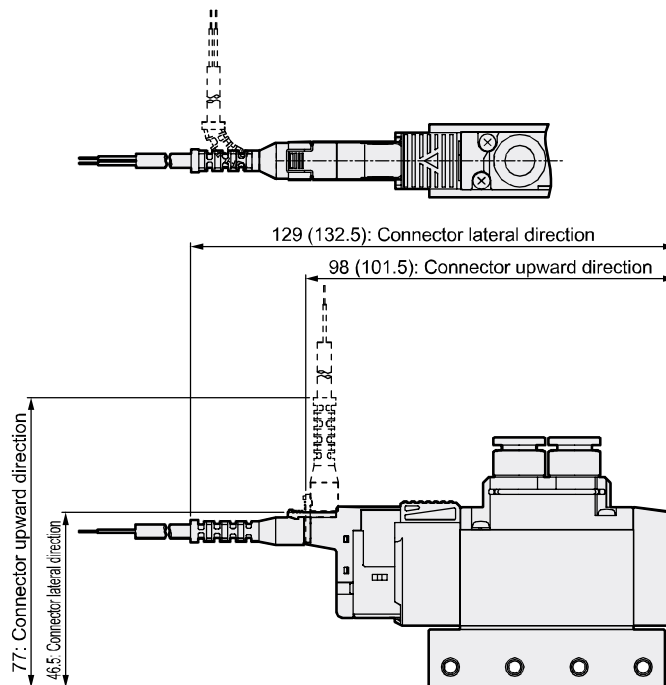
## Dimensions Port size; NPT thread

● E type connector (E)



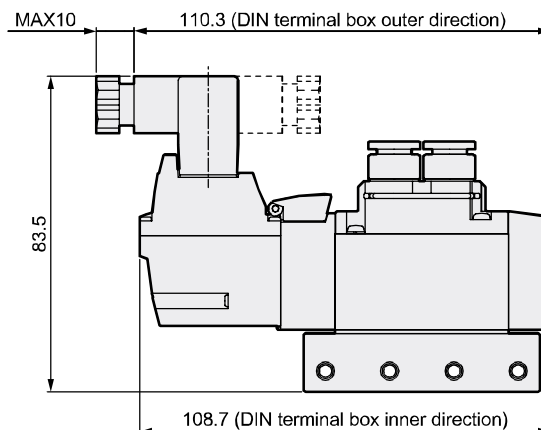
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 3GA3/4GA3 Series

Single valve; body piping

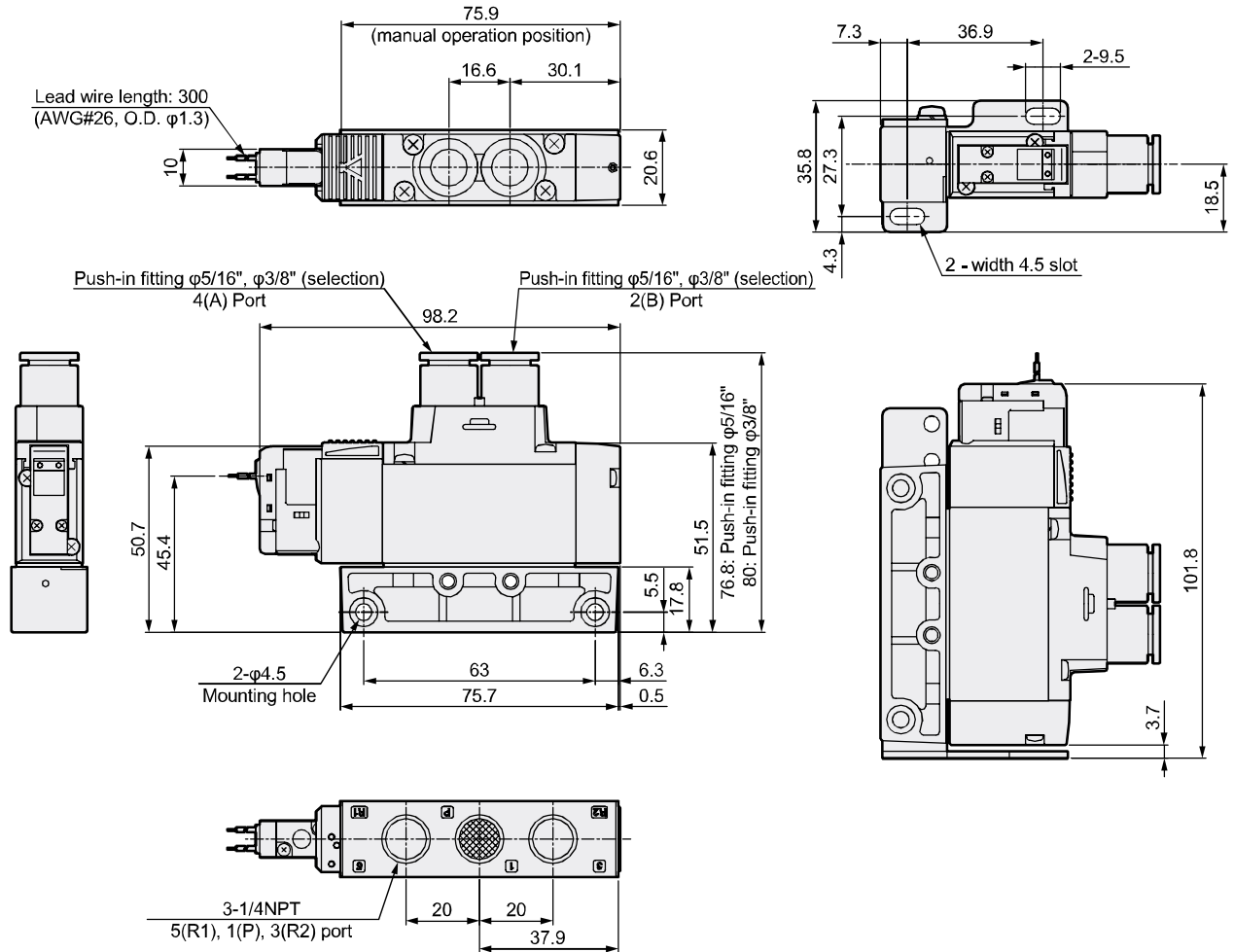
Dimensions Port size; NPT thread

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Slencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

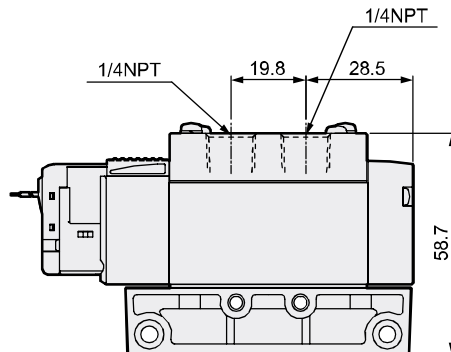
3GA3 1/4OR, 4GA3 1/4OR

● 2-position single grommet lead wire (blank)

● Mounting plate (P)

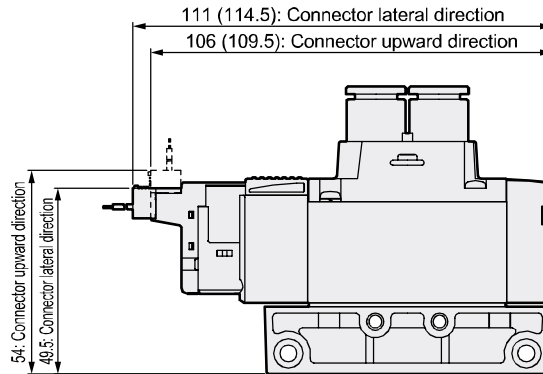


● 1/4NPT female thread (08N)



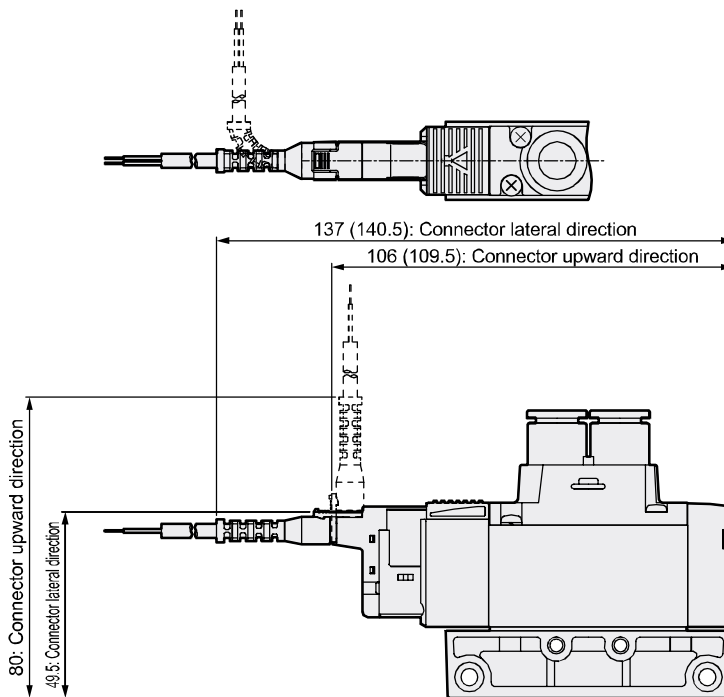
## Dimensions Port size; NPT thread

● E type connector (E)



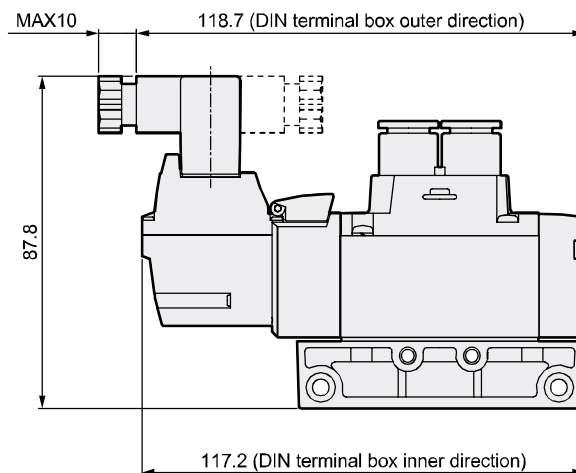
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 3GA2/4GA2 Series

Single valve; body piping

Dimensions Port size; G thread

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

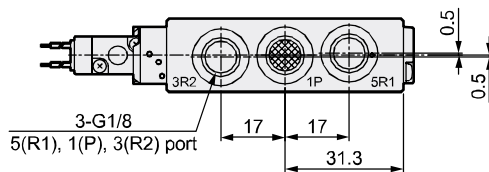
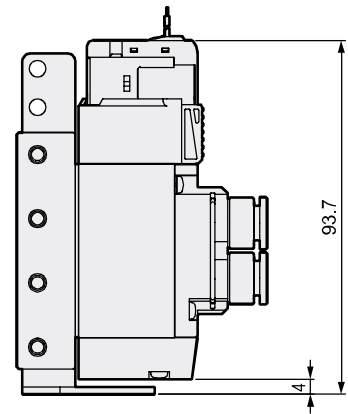
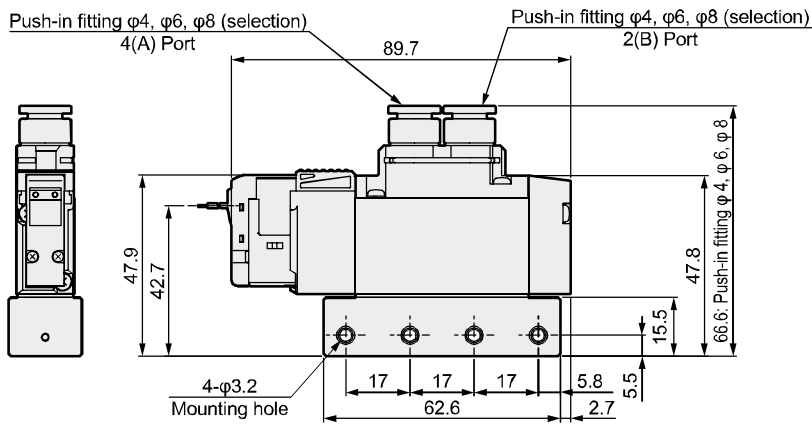
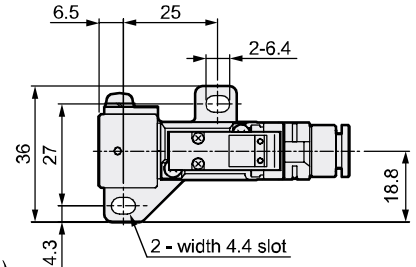
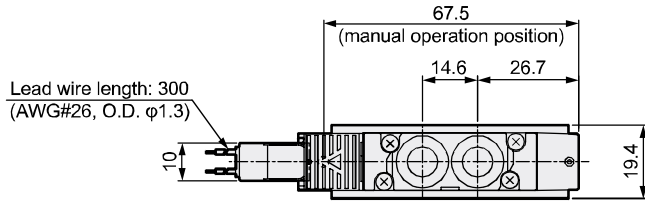
3GA2<sup>1</sup><sub>0R</sub>, 4GA2<sup>1</sup><sub>OR</sub>

<sup>1</sup><sub>0R</sub>  
66  
67  
76  
77

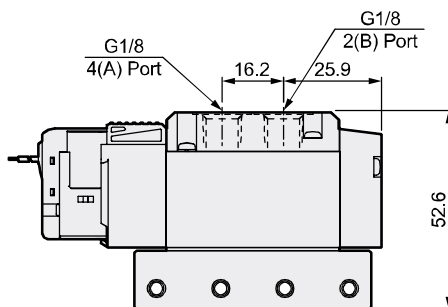
<sup>1</sup><sub>OR</sub>  
5

● 2-position single grommet lead wire (blank)

● Mounting plate (P)

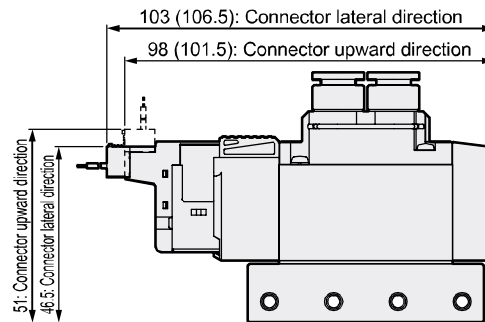


● G1/8 female thread (06G)



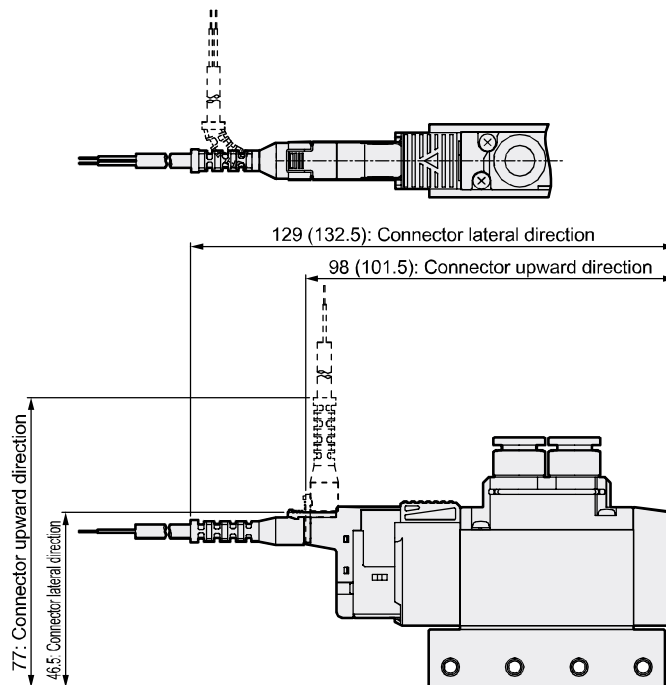
## Dimensions Port size; G thread

● E type connector (E)



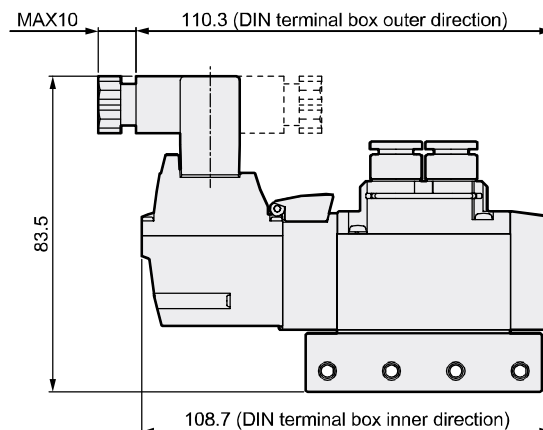
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

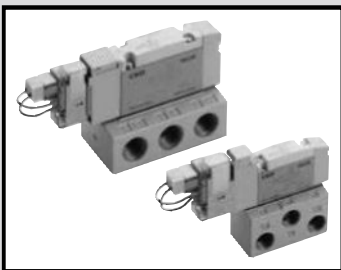
● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4GA/B  
M4GA/B  
MN4GA/B  
4GA/B (mastr)  
4GD/E  
M4GD/E  
MN4GD/E  
4GA4/B4  
MN3E  
MN4E  
W4GA/B2  
W4GB4  
4TB  
4L2-4/  
LMF0  
MN3S0  
MN4S0  
4SA/B0  
4KA/B  
4KA/B (mastr)  
4F  
4F (mastr)  
PV5G  
GMF  
PV5  
GMF  
PV5S-0  
3QR  
3QB  
MV3QR  
3MA/B0  
3PA/B  
P/M/B  
NP/NAP/  
NVP  
4F\*0EX  
4F\*0E  
HMV  
HSV  
2QV  
3QV  
SKH  
PCD  
Silencer  
TotAirSys  
(TotalAir)  
TotAirSys  
(Gamma)  
Ending



Single valve  
Base piping

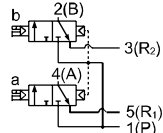
# 3GB1/2 / 4GB1/2/3 Series

● Cylinder bore size:  $\phi 20$  to  $\phi 100$

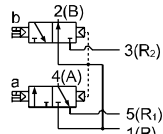


## JIS symbol

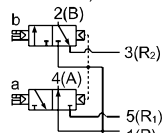
- Two 3-port valves integrated  
(A side valve: NC, B side valve: NC)



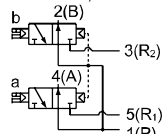
- (A side valve: NC, B side valve: NO)



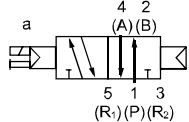
- (A side valve: NO, B side valve: NC)



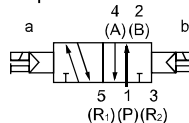
- (A side valve: NO, B side valve: NO)



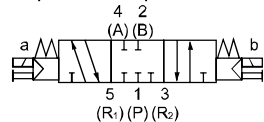
- 5-port valve  
2-position single



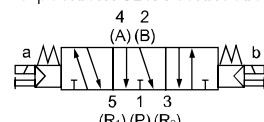
- 2-position double



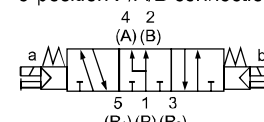
- 3-position all ports closed



- 3-position A/B/R connection



- 3-position P/A/B connection



## Common specifications

Descriptions	Content
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 ( $\approx 100$ psi, 7 bar)
Min. working pressure MPa	0.2 ( $\approx 29$ psi, 2 bar) (*3)
Proof pressure MPa	1.05 ( $\approx 150$ psi, 10.5 bar)
Ambient temperature $^{\circ}\text{C}$	-5 (23 $^{\circ}\text{F}$ ) to 55 (131 $^{\circ}\text{F}$ ) (no freezing)
Fluid temperature $^{\circ}\text{C}$	5 (41 $^{\circ}\text{F}$ ) to 55 (131 $^{\circ}\text{F}$ )
Manual override	Non-locking/locking common (standard)
Pilot exhaust method	Internal pilot Main valve/pilot valve common exhaust External pilot Main valve/pilot valve individual exhaust
Lubrication *1	Not required
Degree of protection *2	Dust-proof
Vibration resistance $\text{m/s}^2$	50 or less
Shock resistance $\text{m/s}^2$	300 or less
Atmosphere	Cannot be used in corrosive gas environments

- \*1 Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.
- \*2 Avoid dripping water or oil, etc., during use.  
IP65 (jet-proof) applies for DIN terminal box specifications. However, the specified outer diameter of the applicable cord and tightening torque must be used for fixing in place.
- \*3 The working pressure range is 0 to 0.7 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

## Individual specifications

Port size		3GB1, 4GB1	3GB2, 4GB2	4GB3
Rc thread	A/B port	Rc1/8	Rc1/4	Rc1/4, Rc3/8
	P/R1/R2 port	Rc1/8	Rc1/4	Rc1/4, Rc3/8
NPT thread (*5)	A/B port	1/8NPT	1/4NPT	1/4NPT, 3/8NPT
	P/R1/R2 port	1/8NPT	1/4NPT	1/4NPT, 3/8NPT
G thread (*5)	A/B port	G1/8	G1/4	-
	P/R1/R2 port	G1/8	G1/4	-

\*5: Available as custom-order.

Descriptions	3GB1/4GB1		3GB2/4GB2		4GB3		
	ON	OFF	ON	OFF	ON	OFF	
Response time ms	Two 3-port valves integrated		9	12	12	29	-
	2-position	Single	12	12	19	19	25
		Double	9	-	18	-	24
3-position	ABR connection	8	15	17	30	23	

Values with a lamp/surge suppressor are shown. The response times are the values with supply pressure of 0.5 MPa at 20 $^{\circ}\text{C}$  without lubrication. They depend on the pressure and the lubricant quality.

Descriptions		3GB1/4GB1	3GB2/4GB2	4GB3	
Weight g	2-position	Single			
		Grommet lead wire	80 (38)	156 (74)	215 (96)
		E type connector	82 (40)	158 (76)	217 (98)
	2-position	DIN terminal box	-	193 (111)	249 (130)
		Double			
		Grommet lead wire	97 (55)	173 (91)	233 (114)
	2-position	E type connector	101 (59)	177 (95)	237 (118)
		DIN terminal box	-	216 (134)	273 (154)
		3-position	All ports closed		
Grommet lead wire	98 (56)		184 (102)	242 (123)	
E type connector	102 (60)		188 (106)	246 (127)	
DIN terminal box	-	227 (145)	282 (163)		

- Values in parenthesis ( ) do not include the single sub-plate. Values for the E type connector include the socket assembly (with 300 mm lead wire). For the EJ type connector, add 16 g/connector to the E type connector weight.
- The weight of the two 3-port valves integrated is the same as that of 2-position double.

## Flow characteristics

Model No.	Solenoid position	P→A/B		A/B→R1/R2		
		C[dm <sup>3</sup> /(s·bar)]	b	C[dm <sup>3</sup> /(s·bar)]	b	
3GB1 4GB1	Two 3-port valves integrated	0.92	0.08	1.1	0.26	
	2-position	1.3	0.27	1.2	0.22	
	3-position	All ports closed	1.1	0.31	1.1	0.27
		ABR connection	1.1	0.31	1.3	0.29
		PAB connection	1.4	0.30	1.1	0.26
3GB2 4GB2	Two 3-port valves integrated	1.7	0.42	2.1	0.26	
	2-position	2.6	0.20	2.6	0.19	
	3-position	All ports closed	2.3	0.32	2.2	0.22
		ABR connection	2.2	0.23	2.6	0.16
		PAB connection	2.4	0.10	2.4	0.22
4GB3	2-position	4.3	0.24	4.2	0.24	
	3-position	All ports closed	3.3	0.40	3.4	0.27
		ABR connection	3.3	0.36	4.2	0.18
		PAB connection	4.5	0.28	3.4	0.30

\*1: Effective cross-sectional area S and sonic conductance C are converted as  $S \approx 5.0 \times C$ .

Ozone-proof specifications · Coolant proof specifications

Can be selected with "How to order" Item (E) option "A" on page 62.

Clean-room specifications

- Anti-dust generation structure for use in cleanrooms

\*\* - Voltage - **P7\***

Specifications for rechargeable battery (Catalog No. CC-1226A)

- For use in the rechargeable battery manufacturing process, materials used for air path and sliding section are limited

\*\* - Voltage - **P4**

CE marking specifications

\*\* - Voltage - **ST**

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 3GB1/2 / 4GB1/2/3 Series

Single valve; base piping

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Slencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

## How to order

**4GB1** **1** **0** **R** - **06** - **E2** - **3**

**3GB1** **66** **0** **R** - **06** - **E2** - **3**

Discrete valve for mounting base

**4GB1** **1** **9** **R** - **00** - **E2** **H** - **3**

3 port discrete valve for mounting base

**3GB1** **66** **9** **R** - **00** - **E2** **H** - **3**

**A** Model No.  
**B** Solenoid position

**C** Port size

**D** Electrical connections  
Refer to page 11 for the circuit diagram with surge suppressor/lamp.

**E** Option

**F** Voltage

## ⚠ Precautions for model No. selection

- \*1 : Not compatible with combination with external pilot (K). Dimensions are the same as those of the respective 2-position double solenoid.
- \*2 : Custom order.
- \*3 : 3-position all ports closed and PAB connection are not provided with the exhaust check valve. Refer to page 751 for details on the exhaust check valve.
- \*4 : E2\* type and E2\*J type connectors support 12/24 VDC only. In addition, surgeless "S" and low exoergic/energy-saving circuit "E" cannot be selected together.
- \*5 : Surgeless specifications.
- \*6 : A filter is built into the P-port as standard.
- \*7 : DIN terminal box only is supported.
- \*8 : Grommet lead wire specifications are compatible with DC voltage only.
- \*9 : AC voltages and 12/24 VDC are supported. In addition, a lamp comes with the terminal box.
- \*10 : AC voltage is with a rectifier circuit.

## A Model No.

3GB1	3GB2	4GB1	4GB2	4GB3
------	------	------	------	------

Code	Content	3GB1	3GB2	4GB1	4GB2	4GB3
<b>B Solenoid position</b>						
1	2-position single			●	●	●
2	2-position double			●	●	●
3	3-position all ports closed			●	●	●
4	3-position ABR connection			●	●	●
5	3-position PAB connection			●	●	●
66	Two 3-port valves integrated *1	●	●	A side valve: Normally closed		
	B side valve: Normally closed					
67	Two 3-port valves integrated *1	●	●	A side valve: Normally closed		
	B side valve: Normally open					
76	Two 3-port valves integrated *1	●	●	A side valve: Normally open		
	B side valve: Normally closed					
77	Two 3-port valves integrated *1	●	●	A side valve: Normally open		
	B side valve: Normally open					
<b>C Port size</b>						
Port	4(A)/2(B) port	P/R1/R2 port (2) = Rc1/8 (3) = Rc1/4 (4) = Rc3/8				
06	Rc1/8	(2)	(2)			
08	Rc1/4		(3)	(3)	(3)	
10	Rc3/8				(4)	
Port	4(A)/2(B) port	P/R1/R2 port (5) = 1/8NPT, (6) = 1/4NPT, (7) = 3/8NPT				
06N	1/8NPT (*2)	(5)	(5)			
08N	1/4 NPT (*2)		(6)	(6)	(6)	
10N	3/8NPT (*2)				(7)	
Port	4(A)/2(B) port	P/R1/R2 port (8) = G1/8, (9) = G1/4				
06G	G1/8 (*2)	(8)	(8)			
08G	G1/4 (*2)		(9)	(9)		
00	Discrete valve for mounting base	●	●	●	●	●
<b>D Electrical connections</b>						
Blank	Grommet lead wire (300 mm) (*8)	●	●	●	●	●
B	DIN terminal box (Pg7) with surge suppressor/lamp (*9)		●		●	●
BN	DIN term. box (Pg7) (no terminal box) + surge suppressor *9		●		●	●
<b>E type connector (upward/lateral common)</b>						
E0	Lead wire (300 mm) (*10)	●	●	●	●	●
E00	Lead wire (500 mm) (*10)	●	●	●	●	●
E01	Lead wire (1000 mm) (*10)	●	●	●	●	●
E02	Lead wire (2000 mm) (*10)	●	●	●	●	●
E03	Lead wire (3000 mm) (*10)	●	●	●	●	●
E0N	Without lead wire (without socket) (*10)	●	●	●	●	●
E1	Without lead wire (socket/terminal attached) (*10)	●	●	●	●	●
E2	Lead wire (300 mm), surge suppressor/indicator lamp	●	●	●	●	●
E20	Lead wire (500 mm), surge suppressor/indicator lamp	●	●	●	●	●
E21	Lead wire (1000 mm), surge suppressor/indicator lamp	●	●	●	●	●
E22	Lead wire (2000 mm), surge suppressor/indicator lamp	●	●	●	●	●
E23	Lead wire (3000 mm), surge suppressor/indicator lamp	●	●	●	●	●
E2N	No lead wire (without socket), surge suppressor/indicator lamp	●	●	●	●	●
E3	No lead wire (with socket/terminal), surge suppressor/indicator lamp	●	●	●	●	●
<b>EJ type connector (socket with cover, upward/lateral common)</b>						
E01J	Lead wire (1000 mm) (*10)	●	●	●	●	●
E02J	Lead wire (2000 mm) (*10)	●	●	●	●	●
E03J	Lead wire (3000 mm) (*10)	●	●	●	●	●
E21J	Lead wire (1000 mm), surge suppressor/indicator lamp	●	●	●	●	●
E22J	Lead wire (2000 mm), surge suppressor/indicator lamp	●	●	●	●	●
E23J	Lead wire (3000 mm), surge suppressor/indicator lamp	●	●	●	●	●
<b>E Option</b>						
Blank	Non-locking/locking common manual override	●	●	●	●	●
M	Non-locking manual override	●	●	●	●	●
H	With exhaust check valve (*3)	●	●	●	●	●
K	External pilot			●	●	●
A	Ozone/coolant proof	●	●	●	●	●
S	Surgeless (*4)	●	●	●	●	●
E	Low exoergic/energy saving circuit (*4), (*5)	●	●	●	●	●
F	A/B-port filter built in (*6)	●	●	●	●	●
<b>F Voltage</b>						
1	100 VAC (rectifier integrated)	●	●	●	●	●
2	200 VAC (rectifier integrated) (*7)		●		●	●
3	24 VDC	●	●	●	●	●
4	12 VDC	●	●	●	●	●
7	3 VDC	○	○	○	○	○
8	5 VDC	○	○	○	○	○

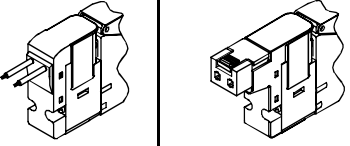
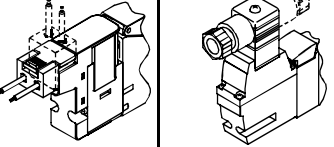
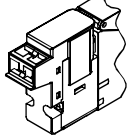
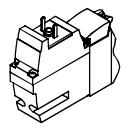
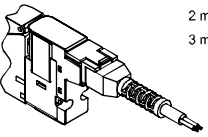
is not available.

○ indicates a custom order.



# 3GB1/2 / 4GB1/2/3 Series

Single valve; base piping

Electrical connections	
Discrete valve/individual wiring manifold	
<b>Blank</b> Grommet lead wire	<b>E1</b> <b>E3</b> E type connector with socket/terminal
<p>● Lead wire length 300 mm</p> 	
<b>E0</b> <b>E2</b> E type connector	<b>B</b> DIN terminal box
<p>● Lead wire length 300 mm 500 mm 1000 mm 2000 mm 3000 mm</p> 	
<b>E0N</b> <b>E2N</b> E type connector without socket	<b>BN</b> DIN terminal box without terminal box
	
<b>E0*J</b> <b>E2*J</b> EJ type connector	
<p>● Lead wire length 1 m 2 m 3 m</p> 	

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 3GB1/4GB1 Series

Single valve; base piping

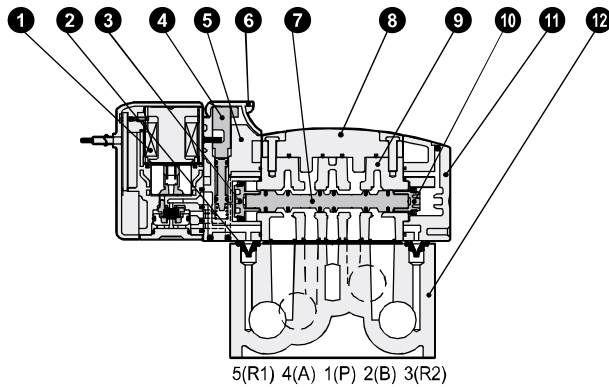
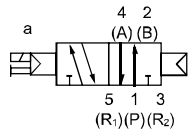
## 4GA/B Internal structure and parts list

### M4GA/B 3GB1660R, 1670R, 1760R, 1770R

- Two 3-port valves integrated Refer to page 66.
- grommet lead wire (blank)

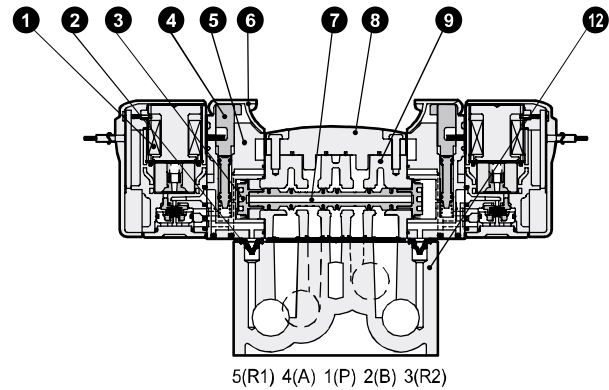
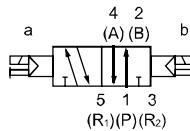
### 4GB110R

- 2-position single
- Grommet lead wire (blank)



### 4GB120R

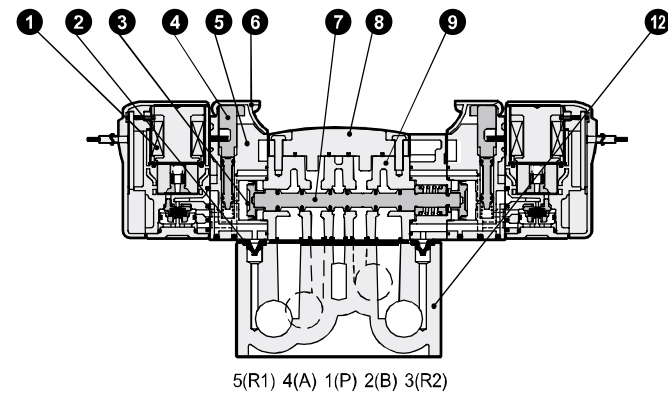
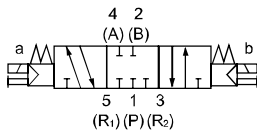
- 2-position double
- Grommet lead wire (blank)



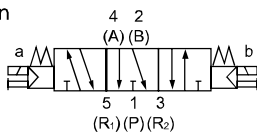
### 4GB1<sup>3</sup>/<sub>4</sub>0R

- 3-position
- Grommet lead wire (blank)

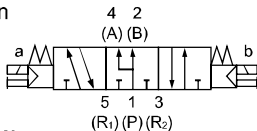
All ports closed



A/B/R connection



P/A/B connection



## Main parts list

## Parts list

No.	Part name	Material	No.	Part name	Model No.
1	Coil assembly	-	1	Coil assembly	4GR <input type="checkbox"/> electrical connections <input type="checkbox"/> -COIL- <input type="checkbox"/> voltage Blank: Standard A: Ozone specification S: Surgeless E: Low exergical energy saving circuit Blank: Grommet lead wire
2	Pilot exhaust check valve	Hydrogenated nitrile rubber			
3	Piston D assembly	-			
4	Manual override	Resin			
5	Piston chamber	Resin			
6	Manual protection cover	Resin			
7	Spool assembly	-			
8	Plate	Resin			
9	Body	Aluminum alloy die-casting			
10	Piston S assembly	-			
11	Cap	Resin			
12	Discrete sub-plate	Aluminum alloy die-casting			

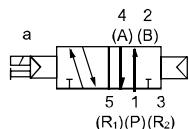
## Internal structure and parts list

### 3GB2660R, 2670R, 2760R, 2770R

- Two 3-port valves integrated Refer to page 66.
- Grommet lead wire (blank)

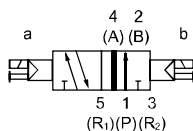
### 4GB210R/4GB310R

- 2-position single
- Grommet lead wire (blank)



### 4GB220R/4GB320R

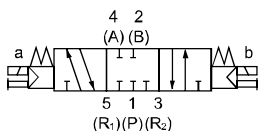
- 2-position double
- Grommet lead wire (blank)



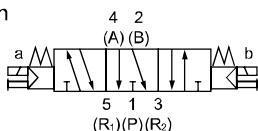
### 4GB2<sup>3</sup>/<sub>4</sub>0R/4GB3<sup>3</sup>/<sub>4</sub>0R

- 3-position
- Grommet lead wire (blank)

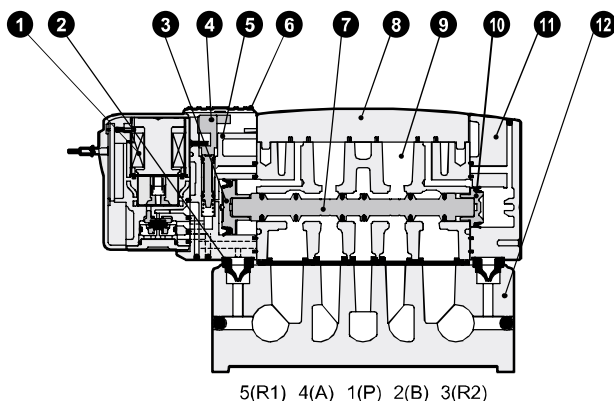
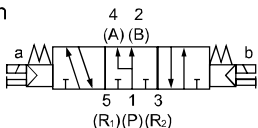
All ports closed



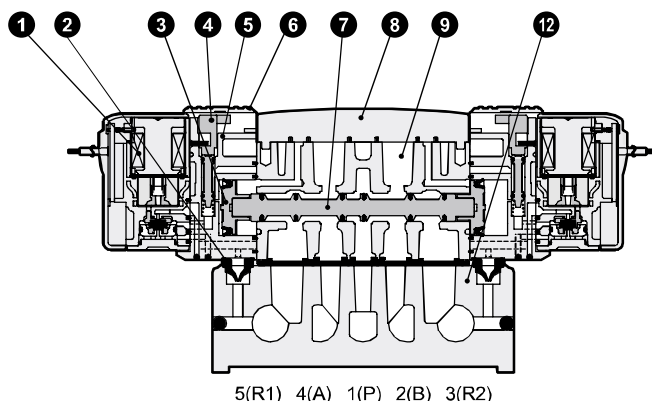
A/B/R connection



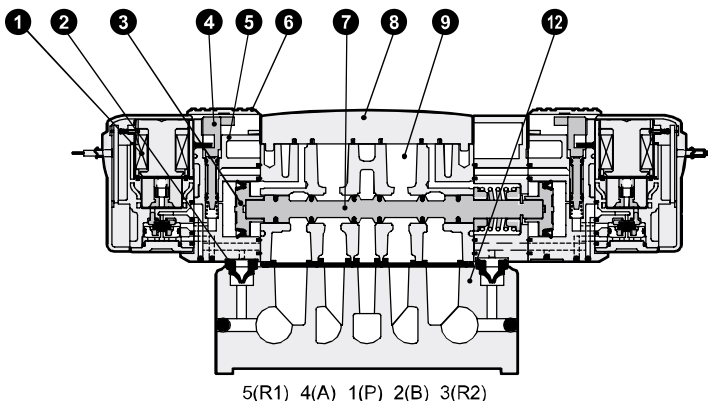
P/A/B connection



5(R1) 4(A) 1(P) 2(B) 3(R2)



5(R1) 4(A) 1(P) 2(B) 3(R2)



5(R1) 4(A) 1(P) 2(B) 3(R2)

## Main parts list

No.	Part name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber
3	Piston D assembly	-
4	Manual override	Resin
5	Piston chamber	Resin
6	Manual protection cover	Resin
7	Spool assembly	-
8	Plate	Resin
9	Body	Aluminum alloy die-casting
10	Piston S assembly	-
11	Cap	Resin
12	Discrete sub-plate	Aluminum alloy die-casting

## Parts list

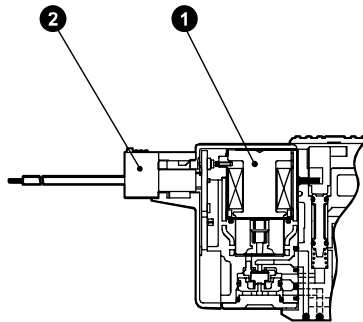
No.	Part name	Model No.
1	Coil assembly	4GR-[electrical connections]-[ ]-COIL-[voltage]

Blank: Standard  
A: Ozone specifications  
S: Surgeless  
E: Low exothermic/energy saving circuit  
Blank: Grommet lead wire

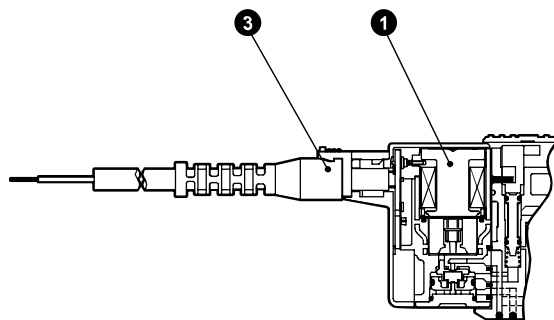
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

## Electrical connections internal structure and parts list

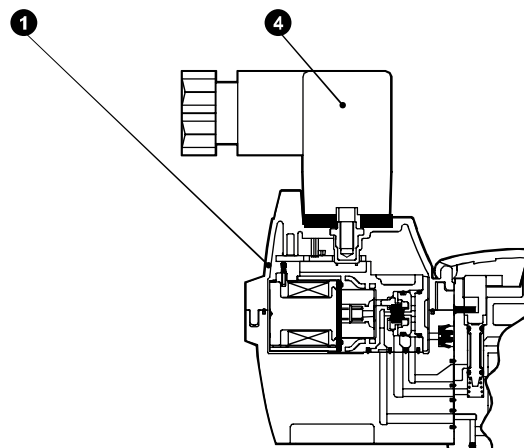
### ● E type connector E□□



### ● EJ type connector E□□J



### ● DIN terminal box B



### Main parts list

No.	Part name	Material
1	Coil assembly	
2	E type connector socket assembly	
3	Socket assembly with cover	
4	DIN terminal box assembly	

### Parts list

No.	Part name	Model No.
1	Coil assembly	4GR-[electrical connections]-□-COIL-[voltage] <small>Blank: Standard  A: Ozone specification  S: Surgeless  E: Low exoergic/energy saving circuit</small> E*: E type connector E*J: Socket with cover type B: DIN terminal box B includes the DIN terminal box BN does not include the DIN terminal box
2	E type connector socket assembly	4GR-SOCKET-ASSY-E**-[Voltage]
3	Socket assembly with cover	4GR-SOCKET-ASSY-E**J
4	DIN terminal box assembly	4GR-TERMINAL-BOX-[Voltage]

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GB1 Series

Single valve; base piping

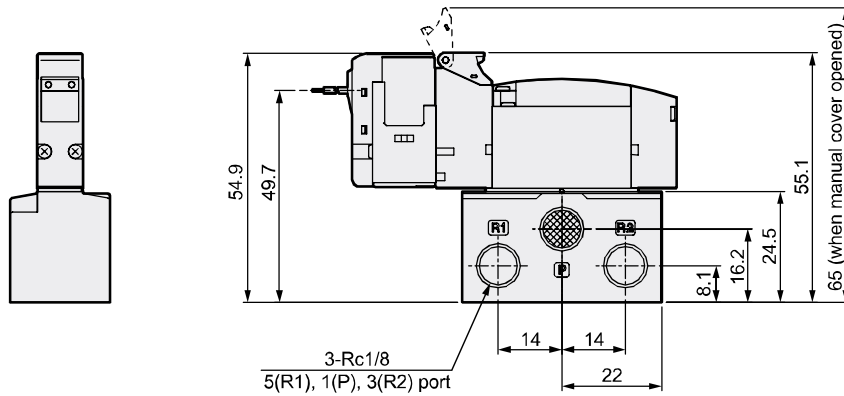
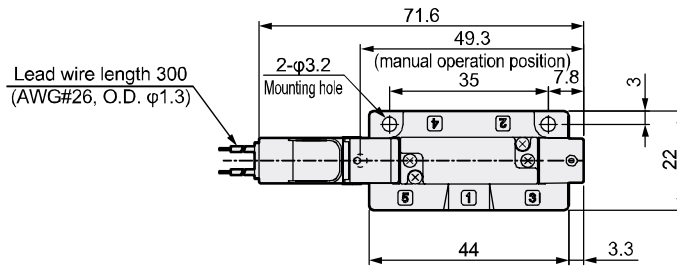
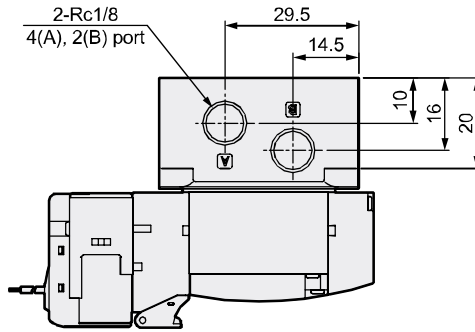
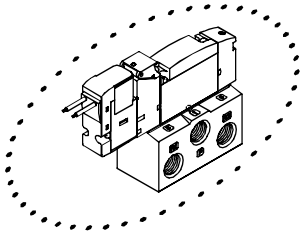


## Dimensions

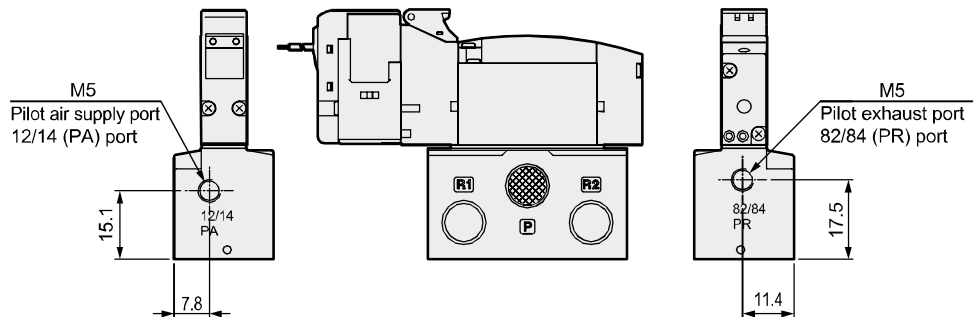
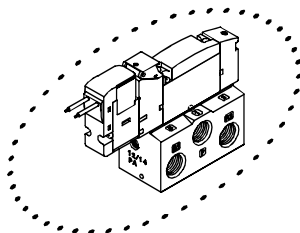
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E  
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/  
LMF0
- MN3S0  
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G  
GMF
- PV5  
GMF
- PV5S-0
- 3QR  
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/  
NVP
- 4F\*0EX
- 4F\*0E
- HMV  
HSV
- 2QV  
3QV
- SKH
- PCD
- Silencer
- TotAirSys  
(TotalAir)
- TotAirSys  
(Gamma)
- Ending

4GB110R \* NPT thread and G thread specifications are listed on pages 86 to 95.

● 2-position single grommet lead wire (blank)

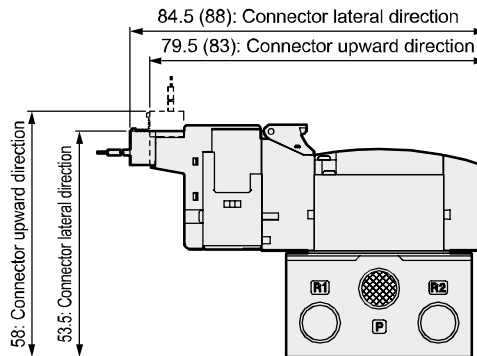
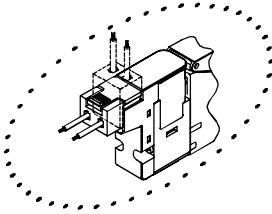


● External pilot (K)



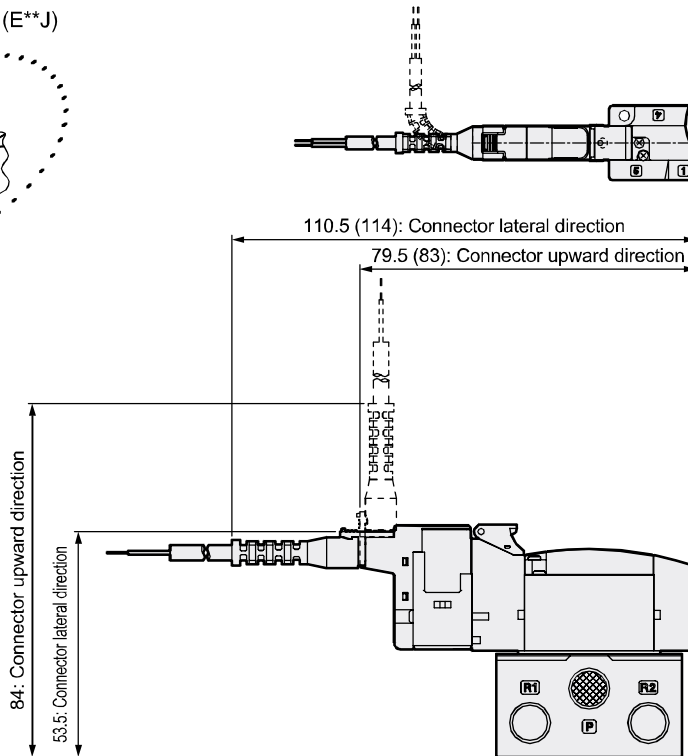
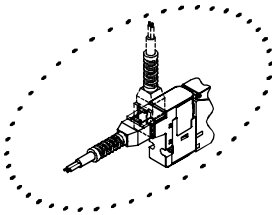
## Dimensions

● E type connector (E)



Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GB1 Series

Single valve; base piping



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

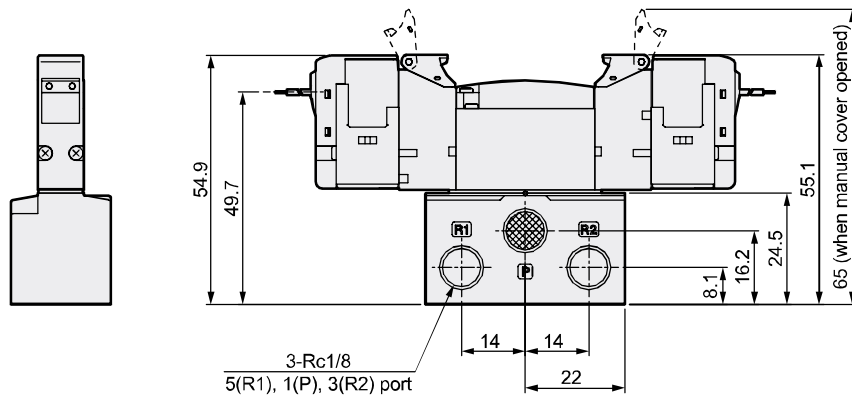
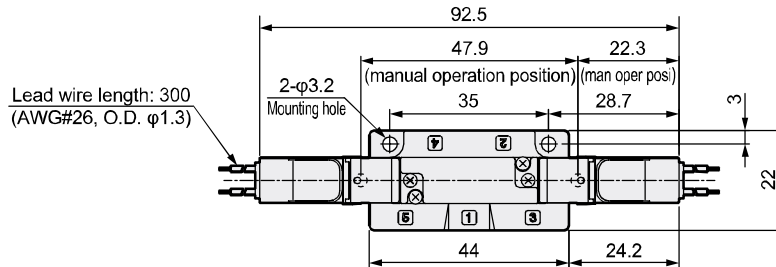
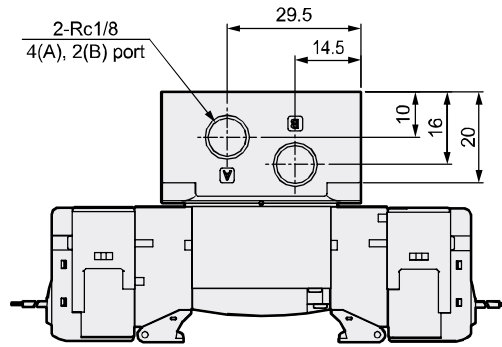
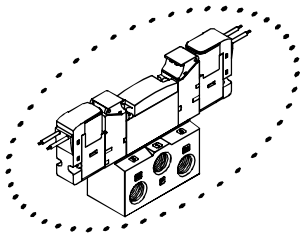
## Dimensions

4GB120R \* NPT thread and G thread specifications are listed on pages 86 to 95.

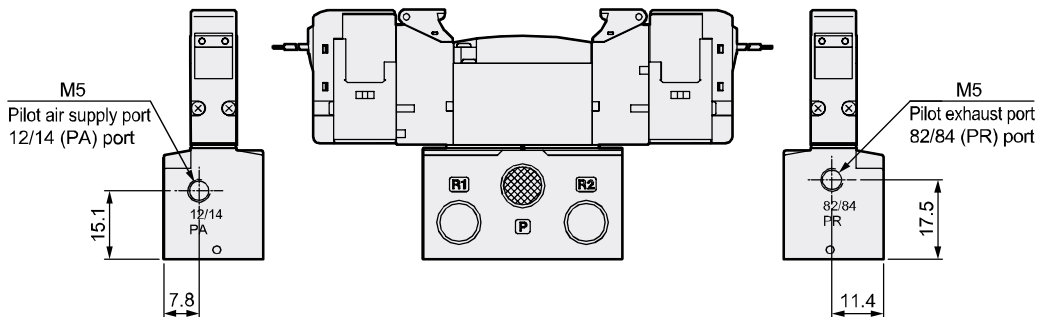
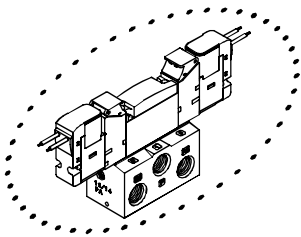
- 2-position double grommet lead wire (blank)

3GB1660R/3GB1670R/3GB1760R/3GB1770R

- Two 3-port valves integrated grommet lead wire (blank)



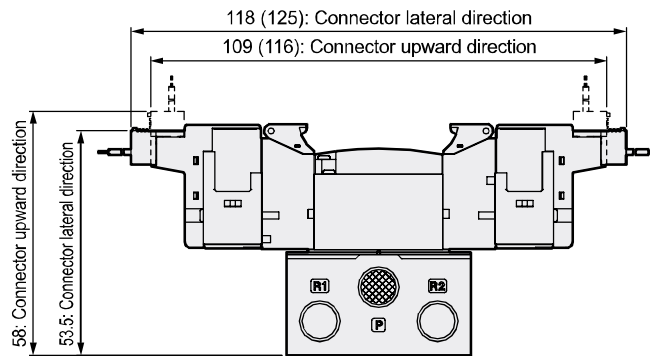
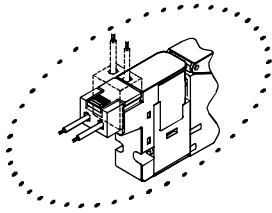
- External pilot (K)



Note: Combination of the two 3-port valves integrated and external pilot is not available.

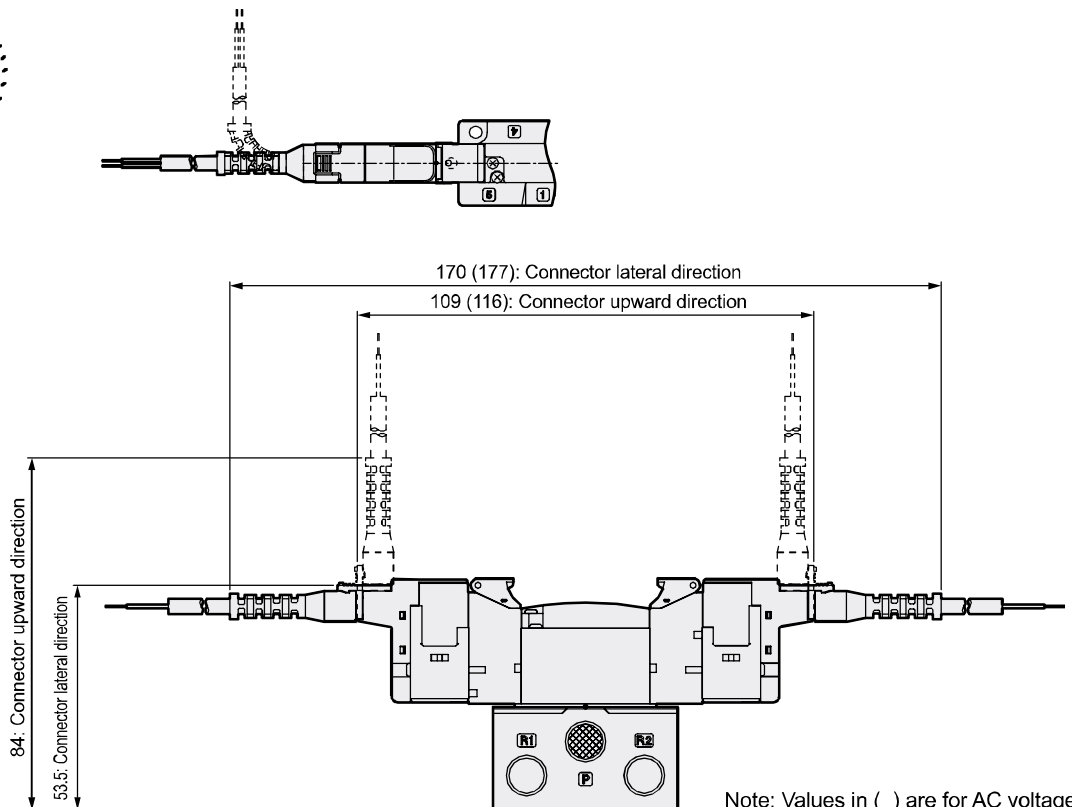
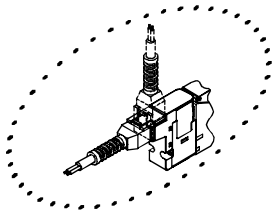
## Dimensions

● E type connector (E)



Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



# 4GB1 Series

Single valve; base piping

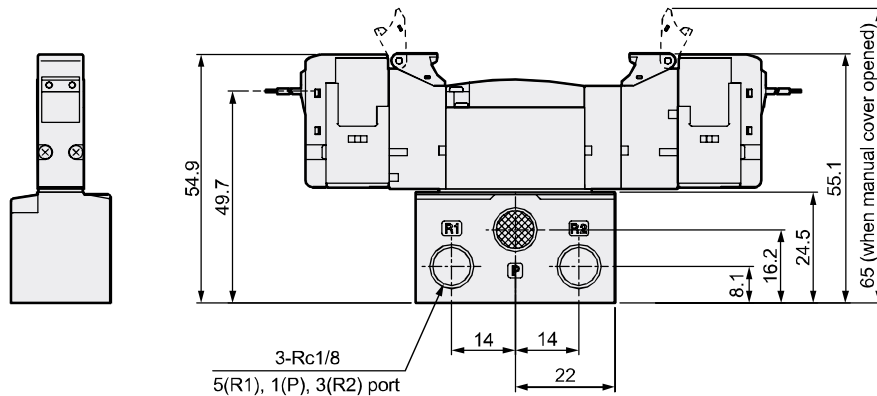
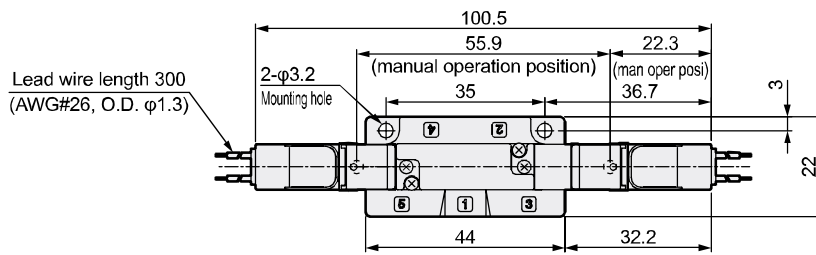
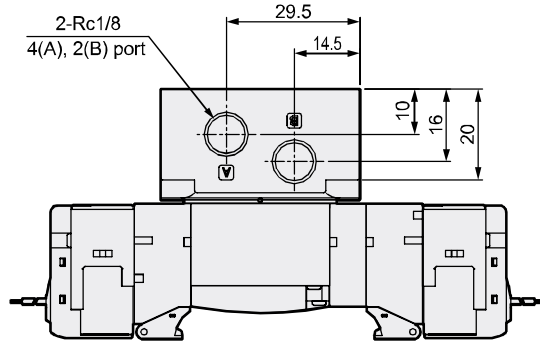
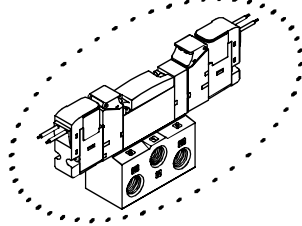
## Dimensions



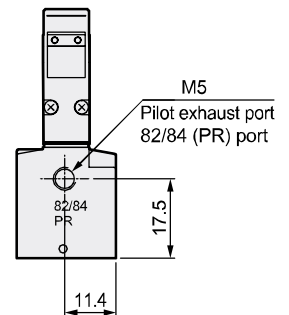
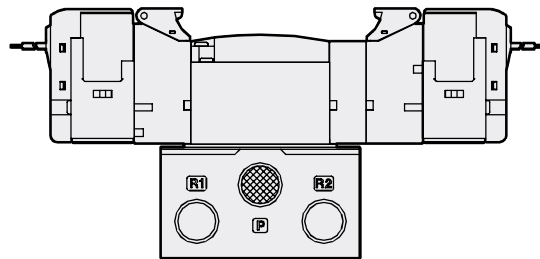
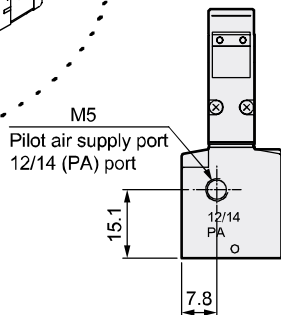
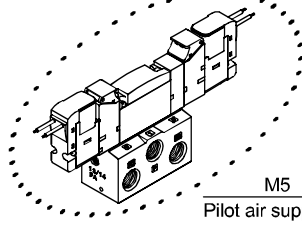
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

4GB1  $\frac{3}{4}$ OR \* NPT thread and G thread specifications are listed on pages 86 to 95.

● 3-position grommet lead wire (blank)

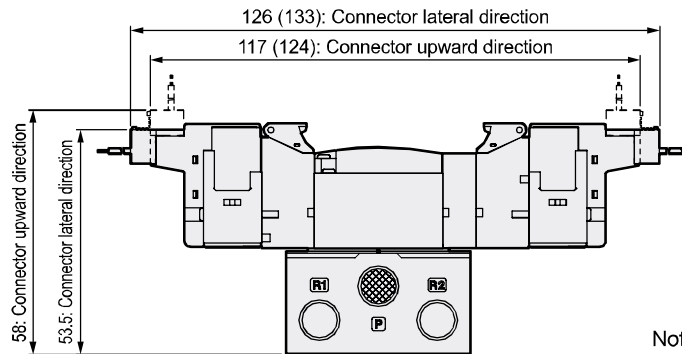
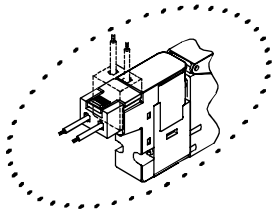


● External pilot (K)



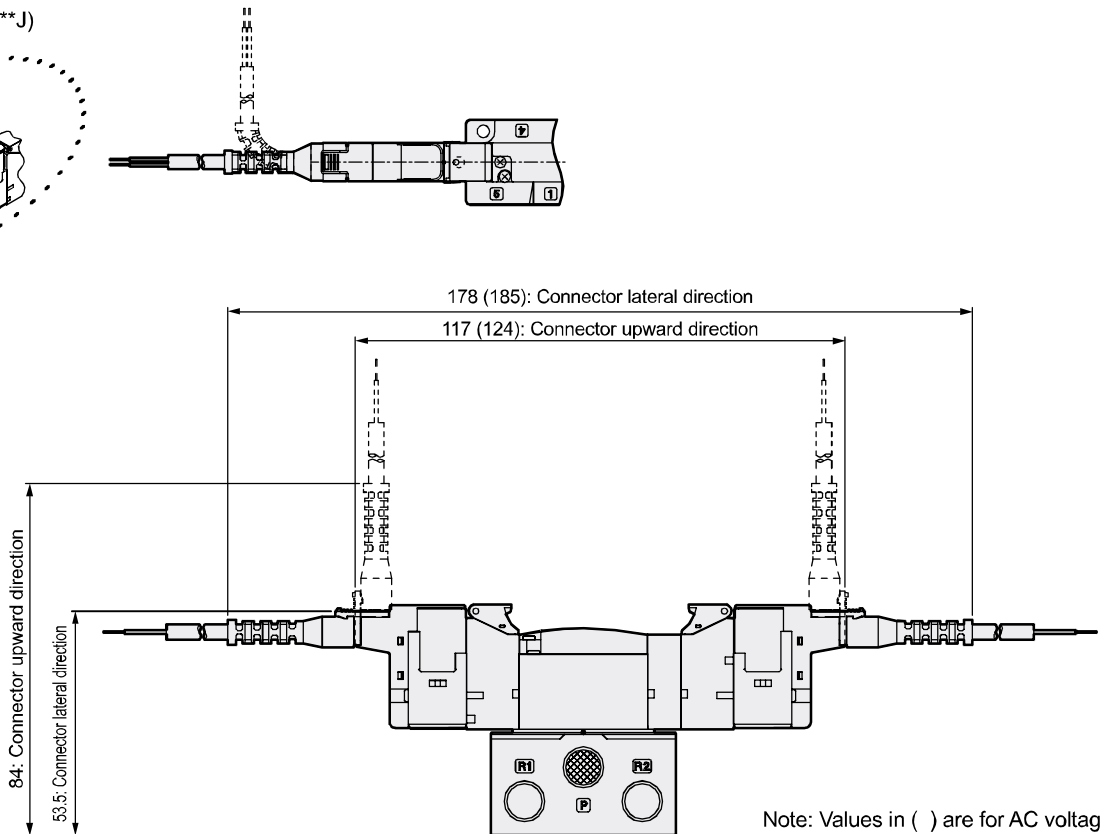
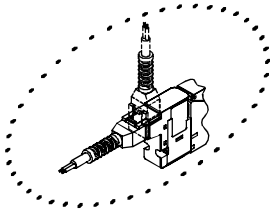
## Dimensions

● E type connector (E)



Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GB2 Series

Single valve; base piping

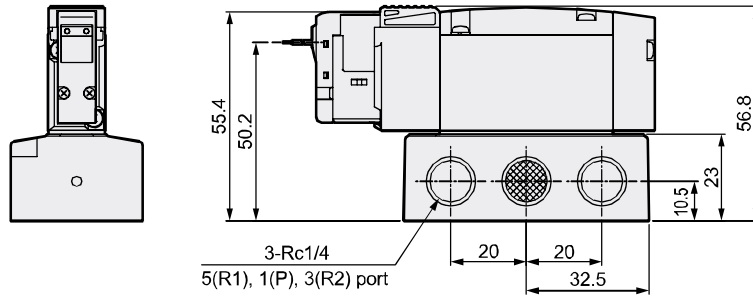
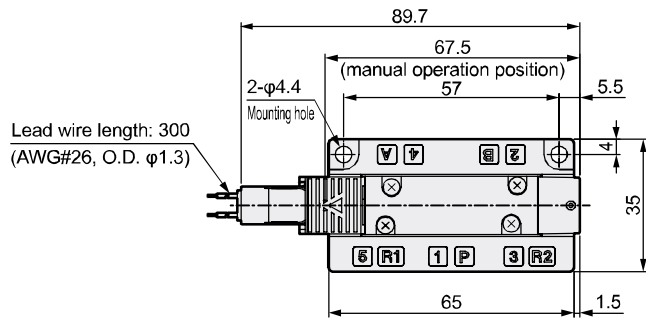
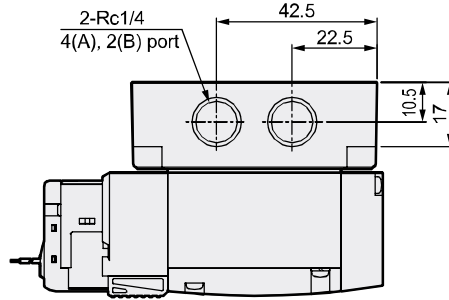
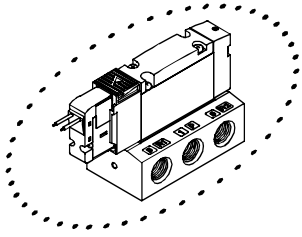
## Dimensions



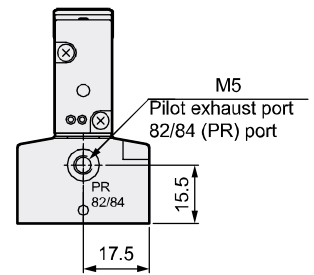
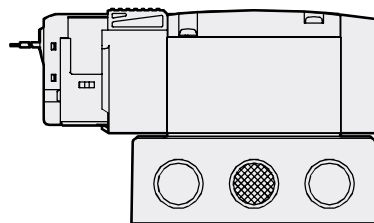
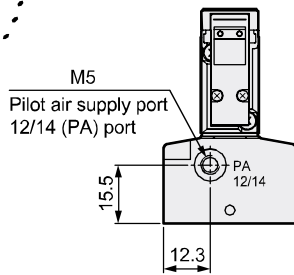
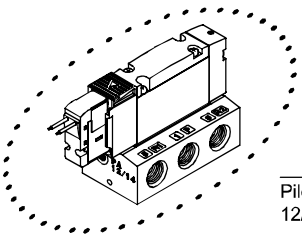
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

4GB210R \* NPT thread and G thread specifications are listed on pages 86 to 95.

● 2-position single grommet lead wire (blank)

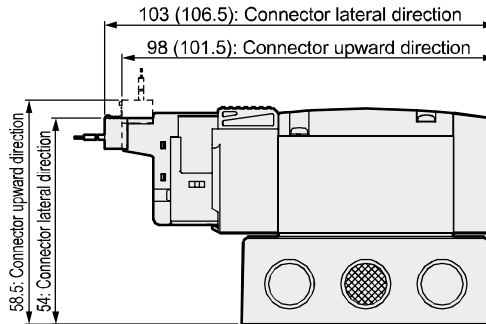
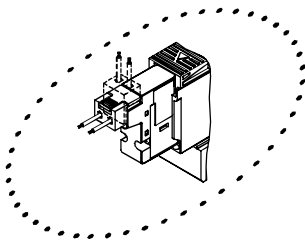


● External pilot (K)



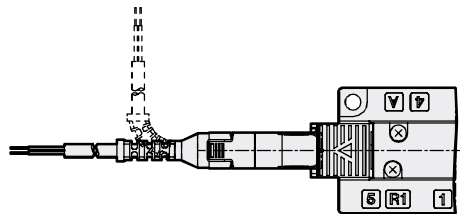
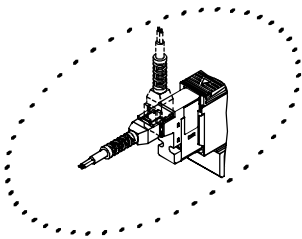
## Dimensions

● E type connector (E)

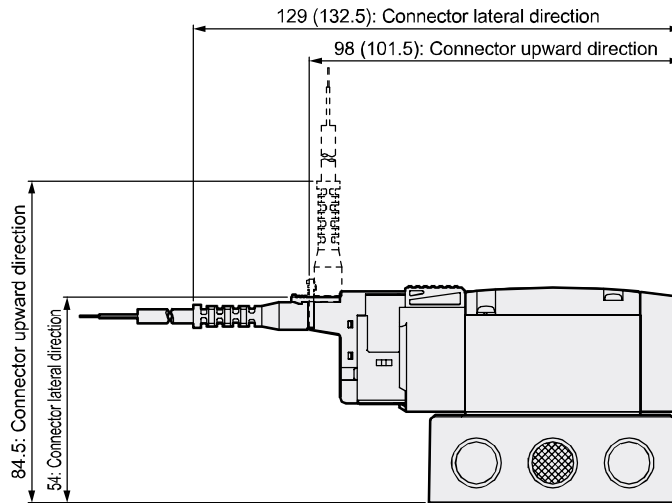


Note: Values in ( ) are for AC voltage.

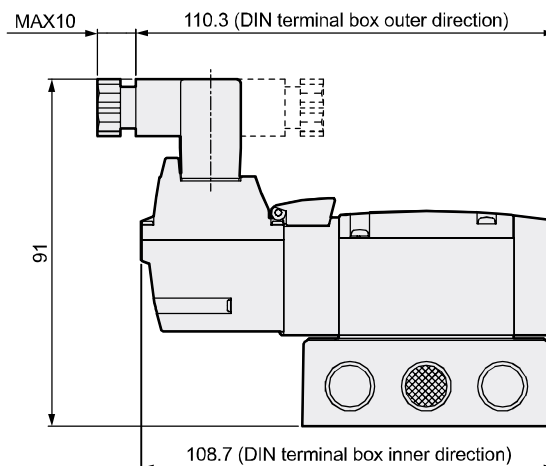
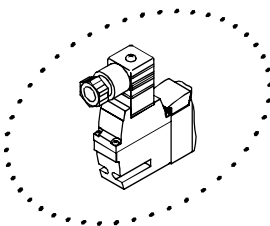
● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.



● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GB2 Series

Single valve; base piping

## Dimensions



4GA/B

M4GA/B

MN4GA/B

4GA/B (mastr)

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E  
MN4E

W4GA/B2

W4GB4

4TB

4L2-4/  
LMF0

MN3S0  
MN4S0

4SA/B0

4KA/B

4KA/B (mastr)

4F

4F (mastr)

PV5G  
GMF

PV5  
GMF

PV5S-0

3QR  
3QB

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP/  
NVP

4F\*0EX

4F\*0E

HMV  
HSV

2QV  
3QV

SKH

PCD

Silencer

TotAirSys  
(TotalAir)

TotAirSys  
(Gamma)

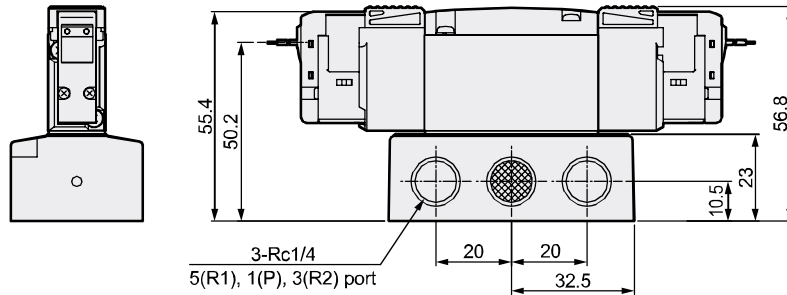
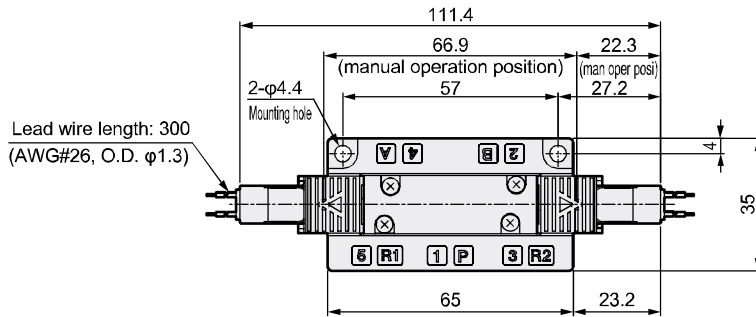
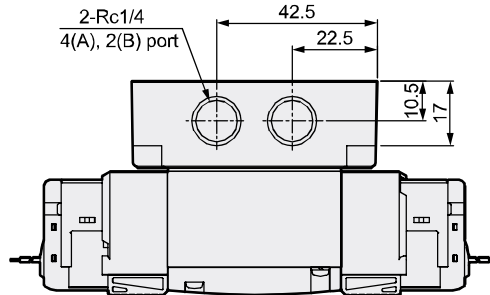
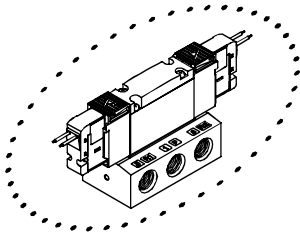
Ending

4GB220R \* NPT thread and G thread specifications are listed on pages 86 to 95.

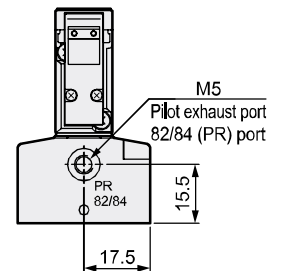
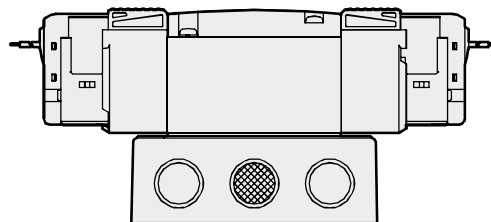
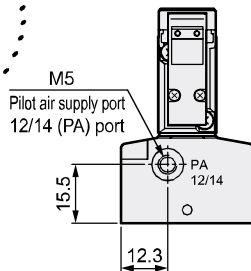
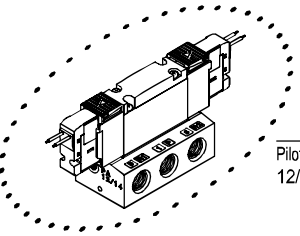
- 2-position double grommet lead wire (blank)

3GB2660R/3GB2670R/3GB2760R/3GB2770R

- Two 3-port valves integrated grommet lead wire (blank)



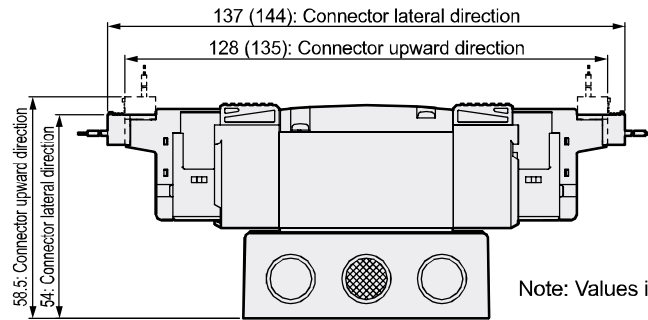
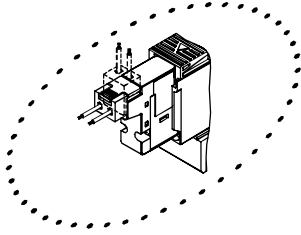
- External pilot (K)



Note: Combination of the two 3-port valves integrated and external pilot is not available.

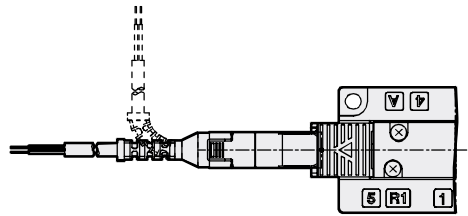
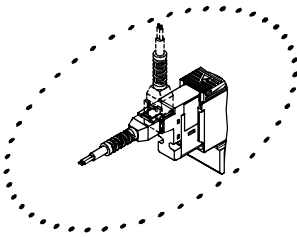
## Dimensions

● E type connector (E)

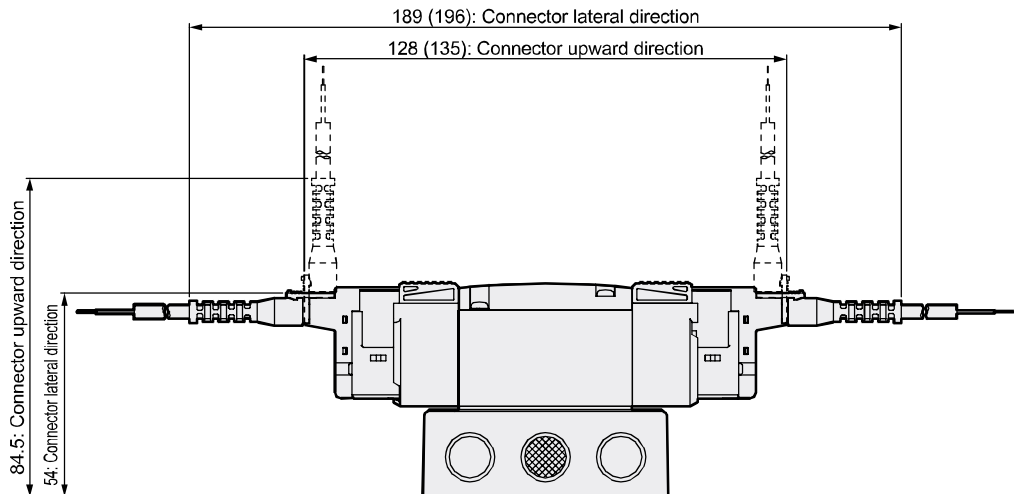


Note: Values in ( ) are for AC voltage.

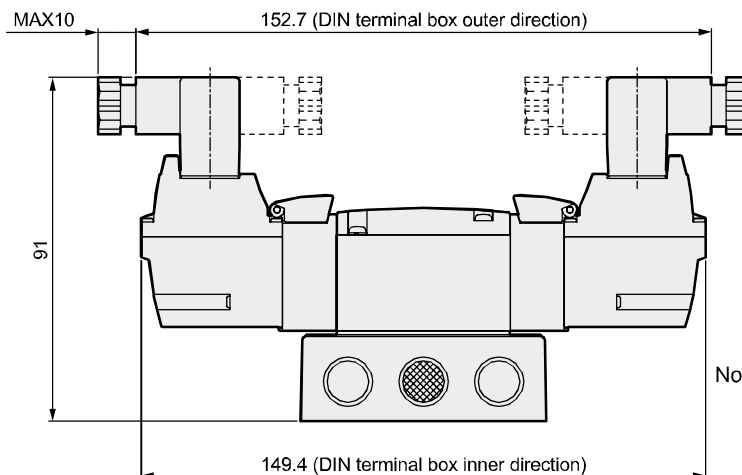
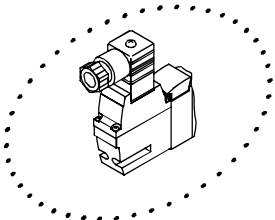
● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.



● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GB2 Series

Single valve; base piping

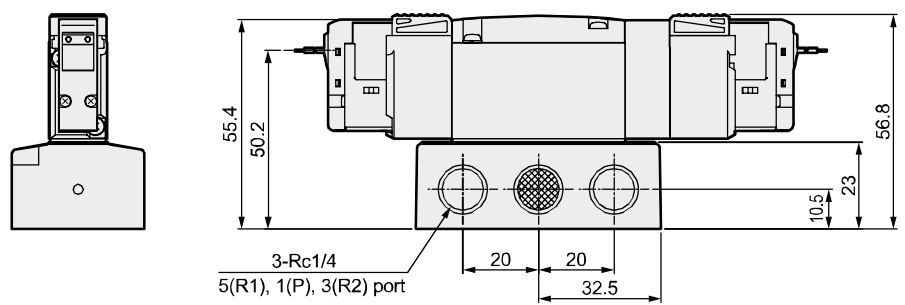
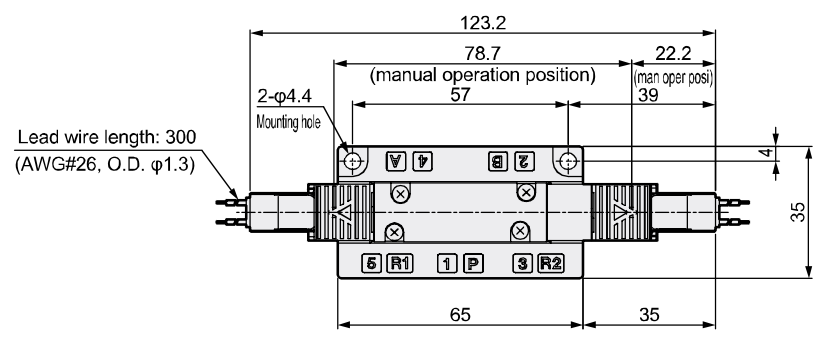
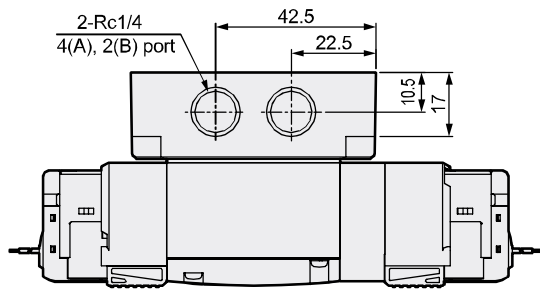
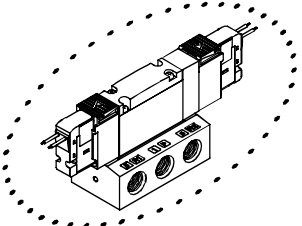
## Dimensions



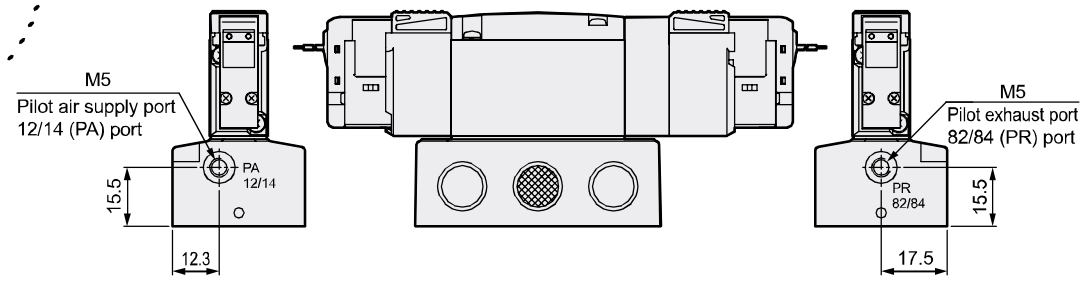
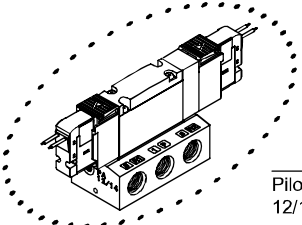
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F\*0EX
- 4F\*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (TotalAir)
- TotAirSys (Gamma)
- Ending

4GB2<sup>0.4.3</sup> 0R \* NPT thread and G thread specifications are listed on pages 86 to 95.

● 3-position grommet lead wire (blank)

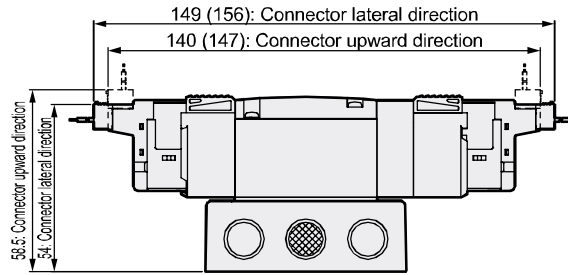
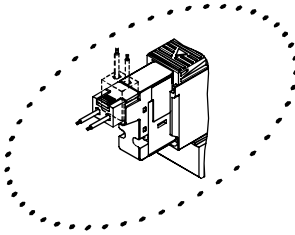


● External pilot (K)



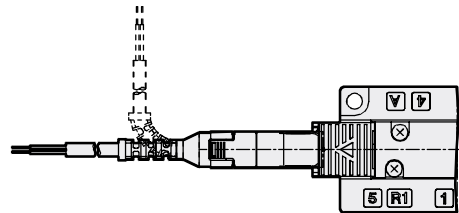
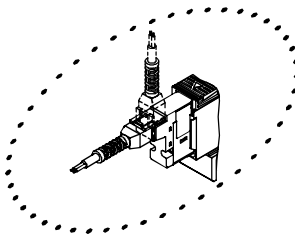
## Dimensions

● E type connector (E)

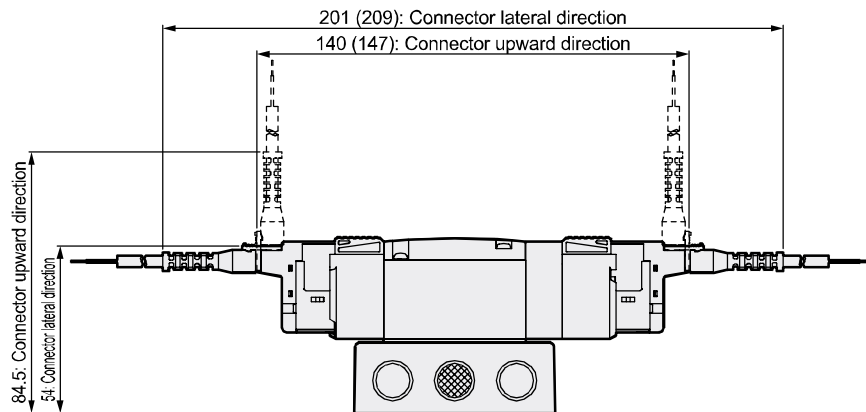


Note: Values in ( ) are for AC voltage.

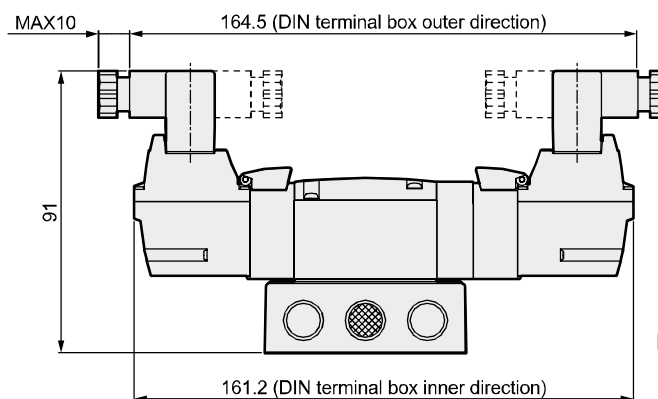
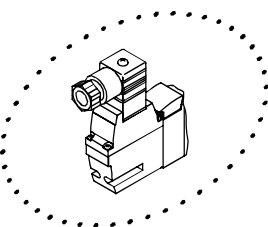
● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.



● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



# 4GB3 Series

Single valve; base piping

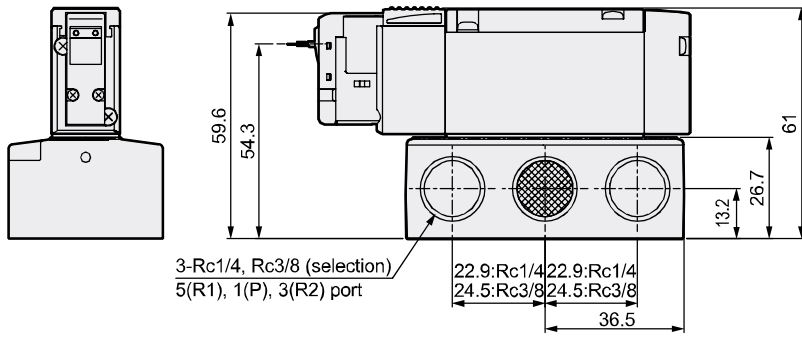
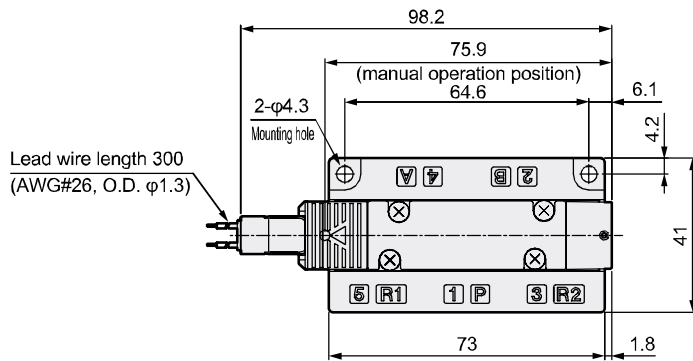
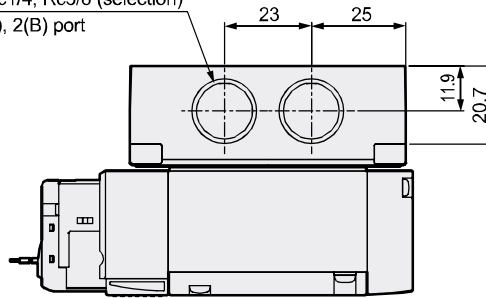
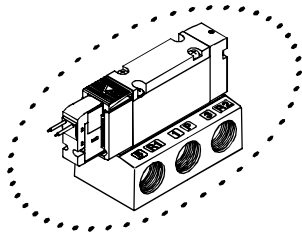
## Dimensions



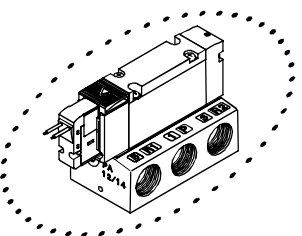
4GB310R \* NPT thread and G thread specifications are listed on pages 86 to 95.

● 2-position single grommet lead wire (blank)

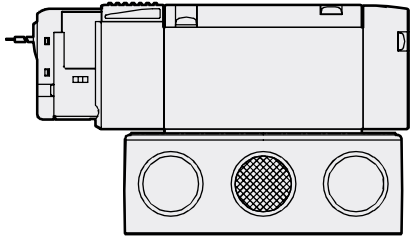
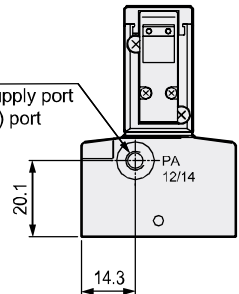
2-Rc1/4, Rc3/8 (selection)  
4(A), 2(B) port



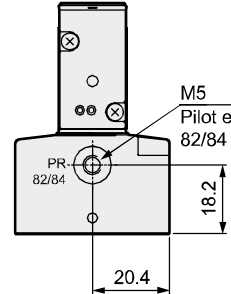
● External pilot (K)



M5  
Pilot air supply port  
12/14 (PA) port



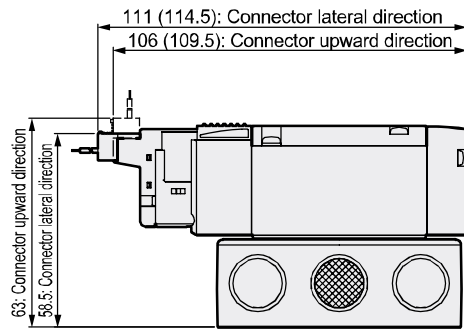
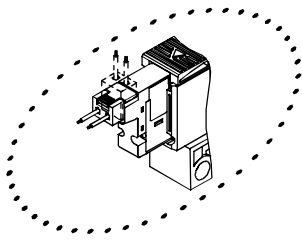
M5  
Pilot exhaust port  
82/84 (PR) port



- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E  
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/  
LMF0
- MN3S0  
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G  
GMF
- PV5  
GMF
- PV5S-0
- 3QR  
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/  
NVP
- 4F\*0EX
- 4F\*0E
- HMV  
HSV
- 2QV  
3QV
- SKH
- PCD
- Silencer
- TotAirSys  
(TotalAir)
- TotAirSys  
(Gamma)
- Ending

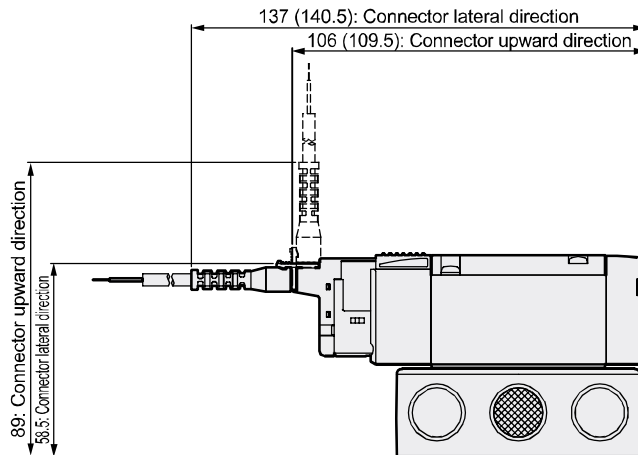
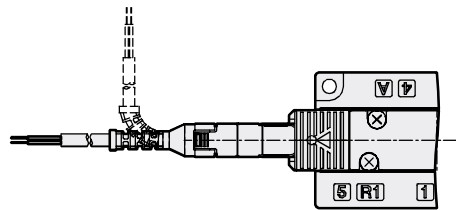
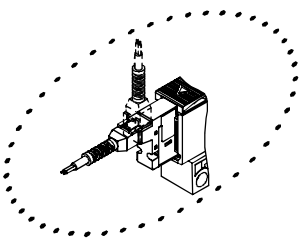
## Dimensions

● E type connector (E)



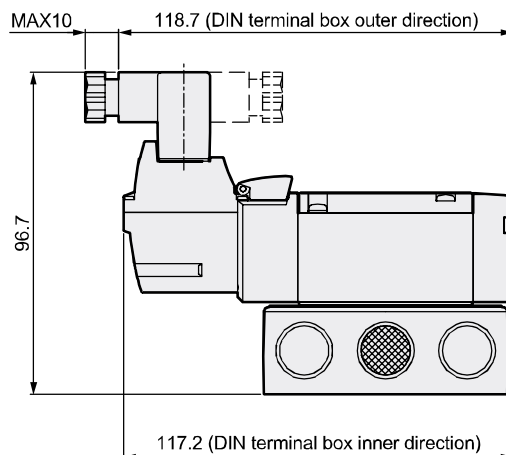
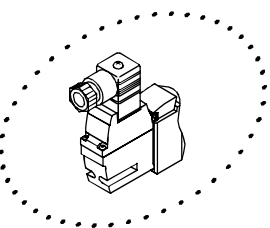
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GB3 Series

Single valve; base piping

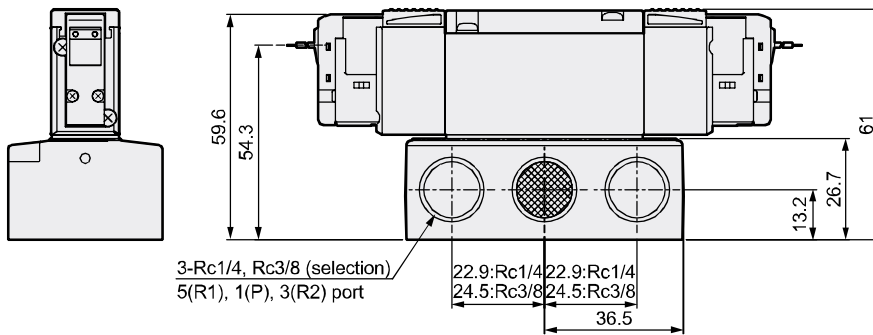
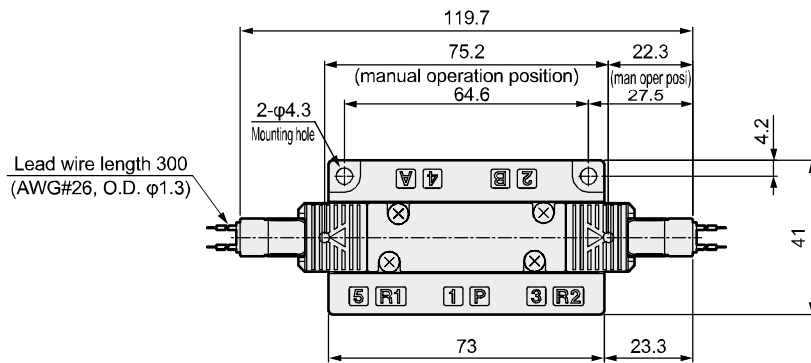
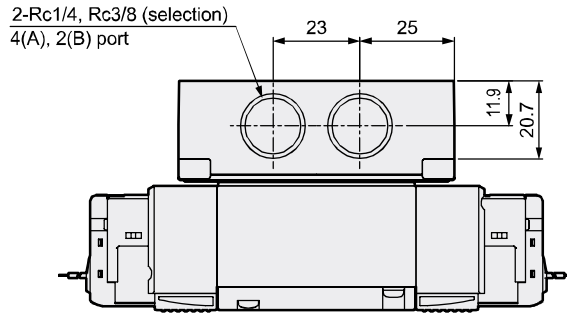
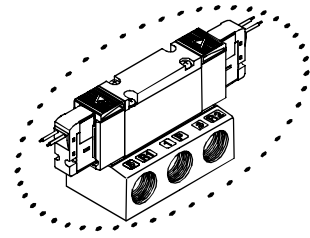
## Dimensions



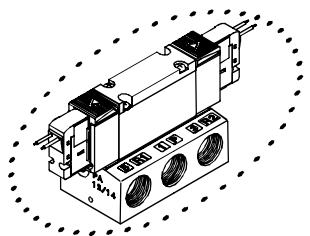
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F\*0EX
- 4F\*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (TotalAir)
- TotAirSys (Gamma)
- Ending

4GB320R \* NPT thread and G thread specifications are listed on pages 86 to 95.

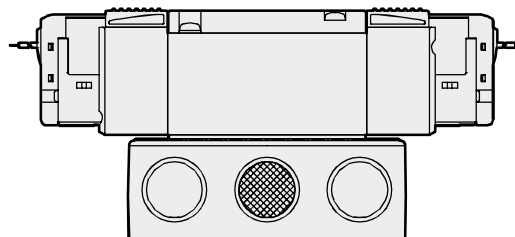
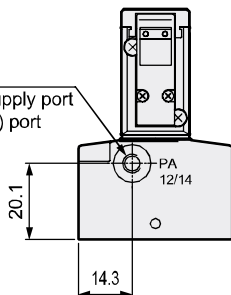
● 2-position double grommet lead wire (blank)



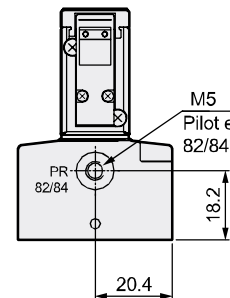
● External pilot (K)



M5  
Pilot air supply port  
12/14 (PA) port

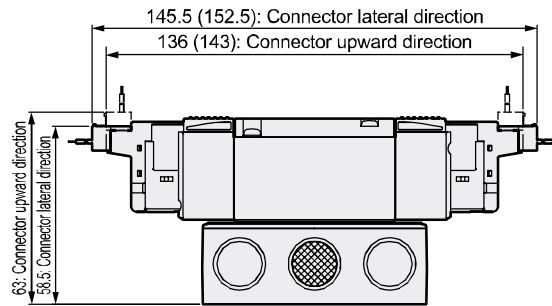
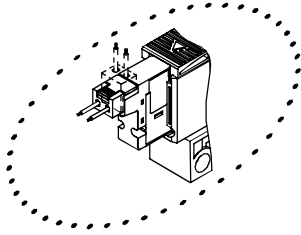


M5  
Pilot exhaust port  
82/84 (PR) port



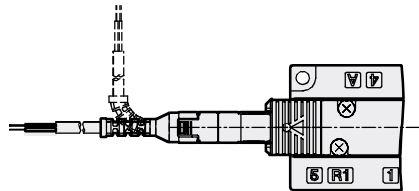
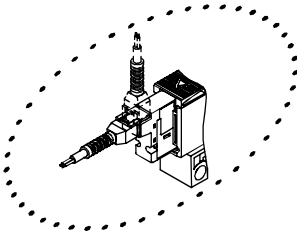
## Dimensions

● E type connector (E)

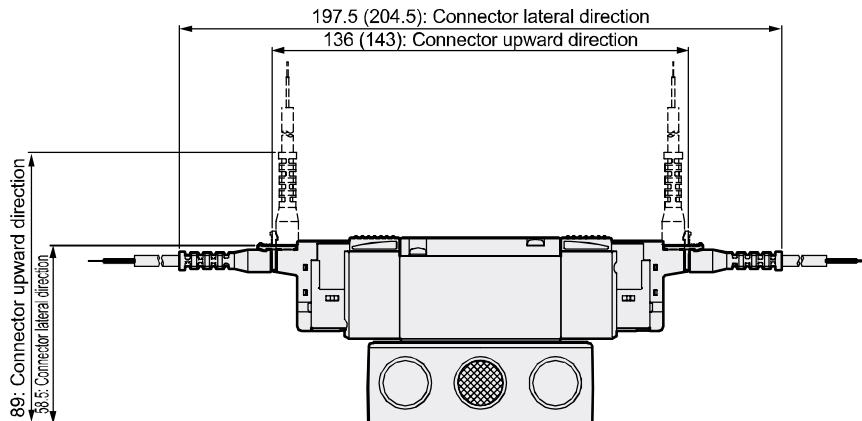


Note: Values in ( ) are for AC voltage.

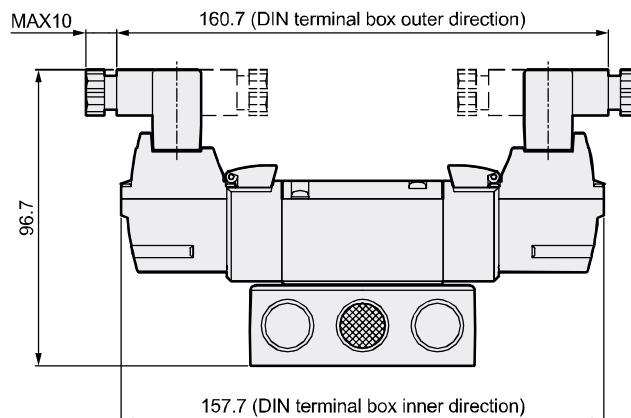
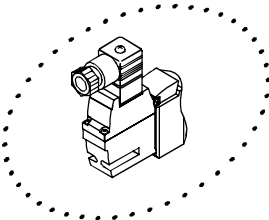
● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.



● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GB3 Series

Single valve; base piping

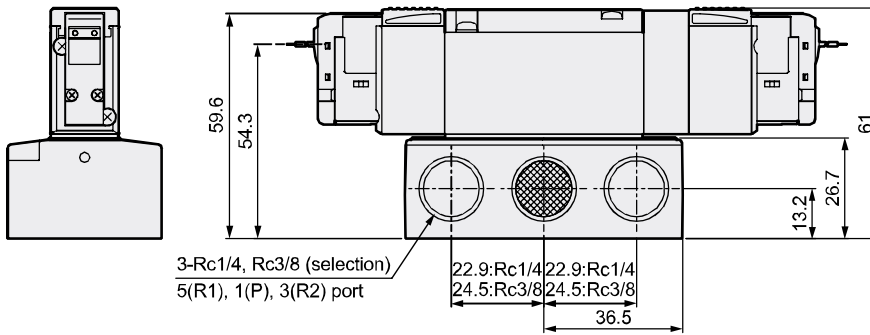
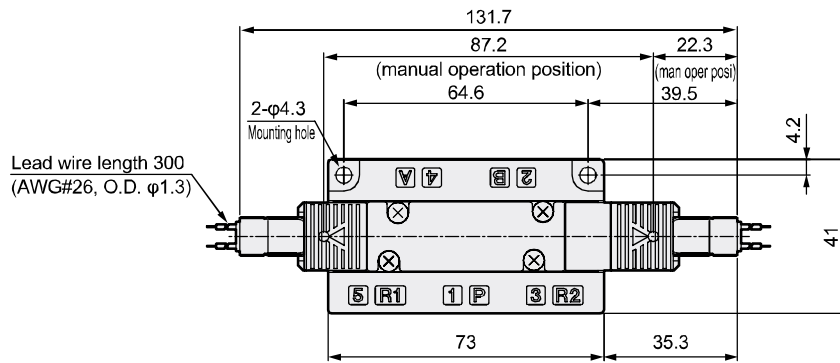
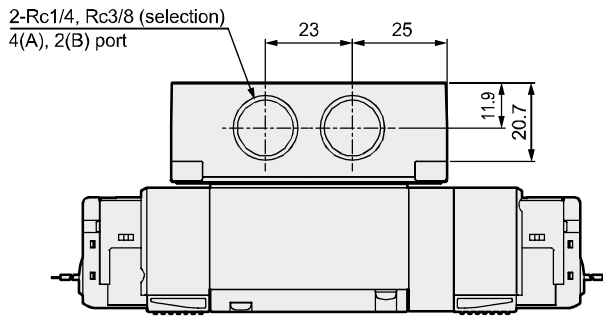
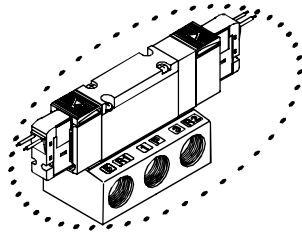
## Dimensions



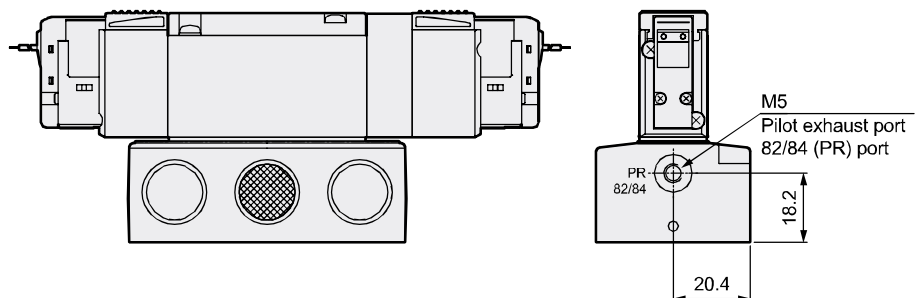
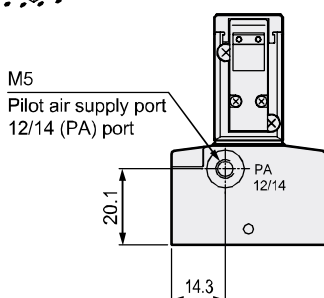
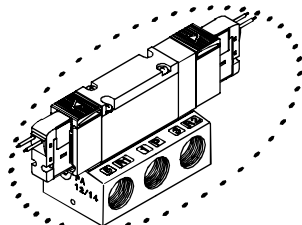
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

4GB3<sup>φ4.3</sup> 0R \* NPT thread and G thread specifications are listed on pages 86 to 95.

● 3-position grommet lead wire (blank)

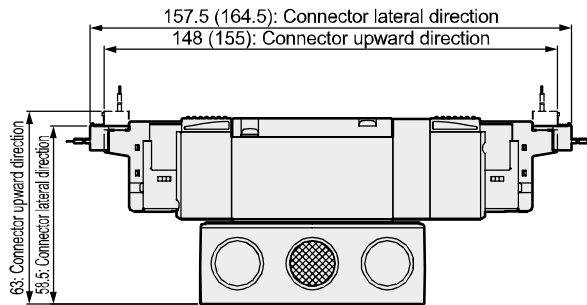
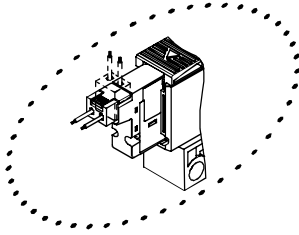


● External pilot (K)



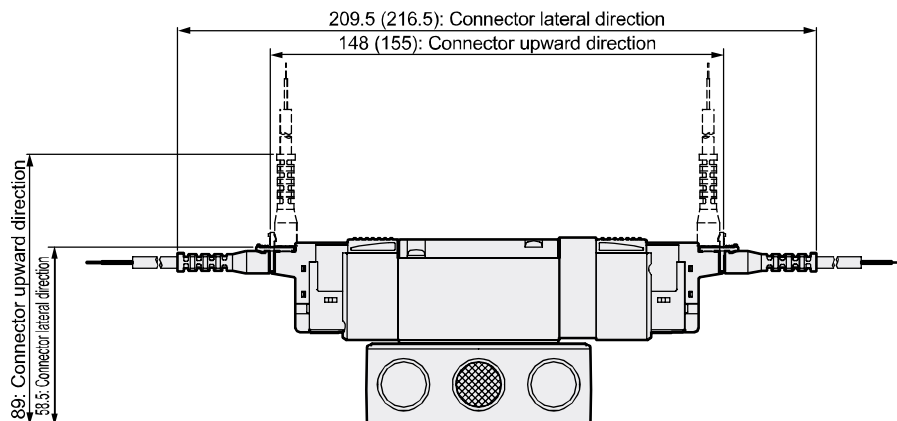
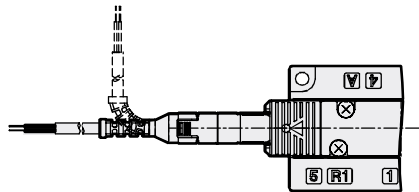
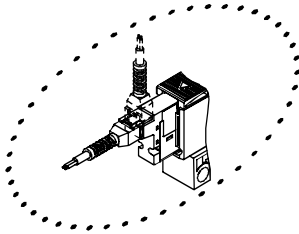
## Dimensions

● E type connector (E)



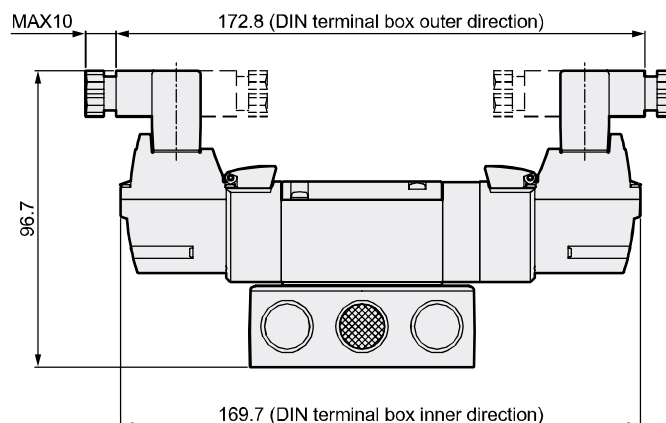
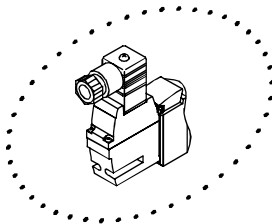
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 3GB1/4GB1 Series

Single valve; base piping

Dimensions Port size; NPT thread

4GA/B

M4GA/B

MN4GA/B

4GA/B (mastr)

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E

MN4E

W4GA/B2

W4GB4

4TB

4L2-4/

LMF0

MN3S0

MN4S0

4SA/B0

4KA/B

4KA/B (mastr)

4F

4F (mastr)

PV5G

GMF

PV5

GMF

PV5S-0

3QR

3QB

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP/

NVP

4F\*0EX

4F\*0E

HMV

HSV

2QV

3QV

SKH

PCD

Silencer

TotAirSys

(TotalAir)

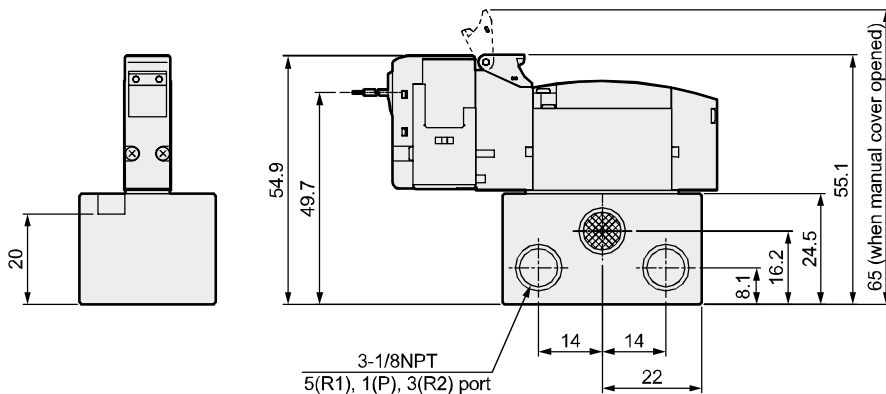
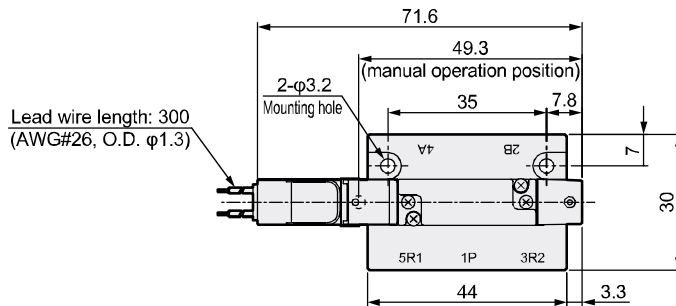
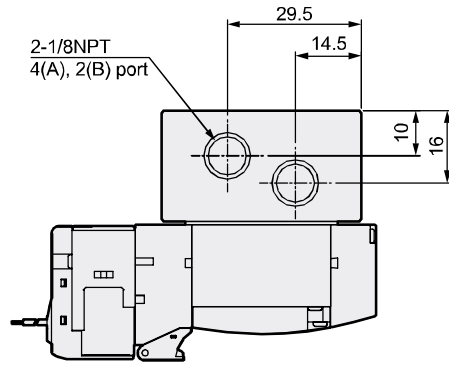
TotAirSys

(Gamma)

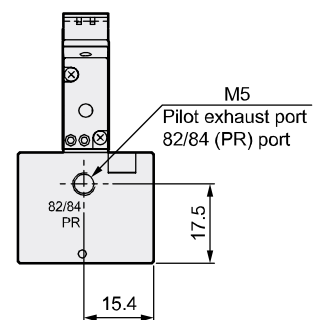
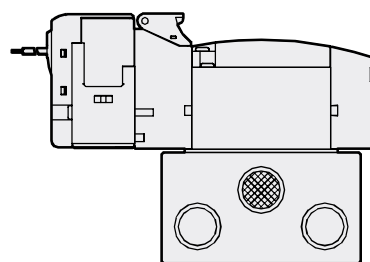
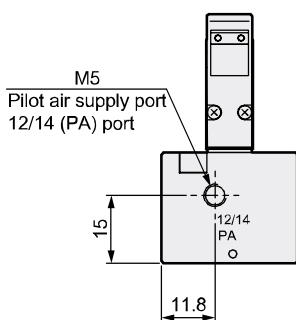
Ending

3GB1<sup>65</sup><sub>67</sub><sup>66</sup><sub>75</sub> OR, 4GB1<sup>1</sup><sub>5</sub> OR

● 2-position single grommet lead wire (blank)

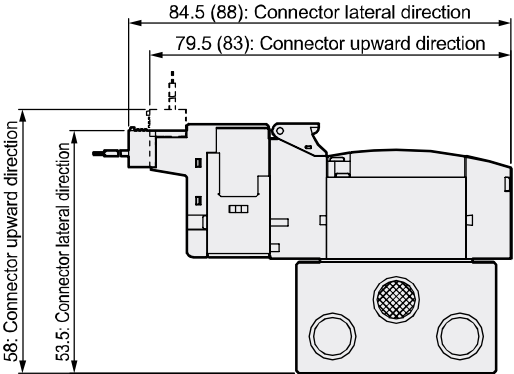


● External pilot (K)



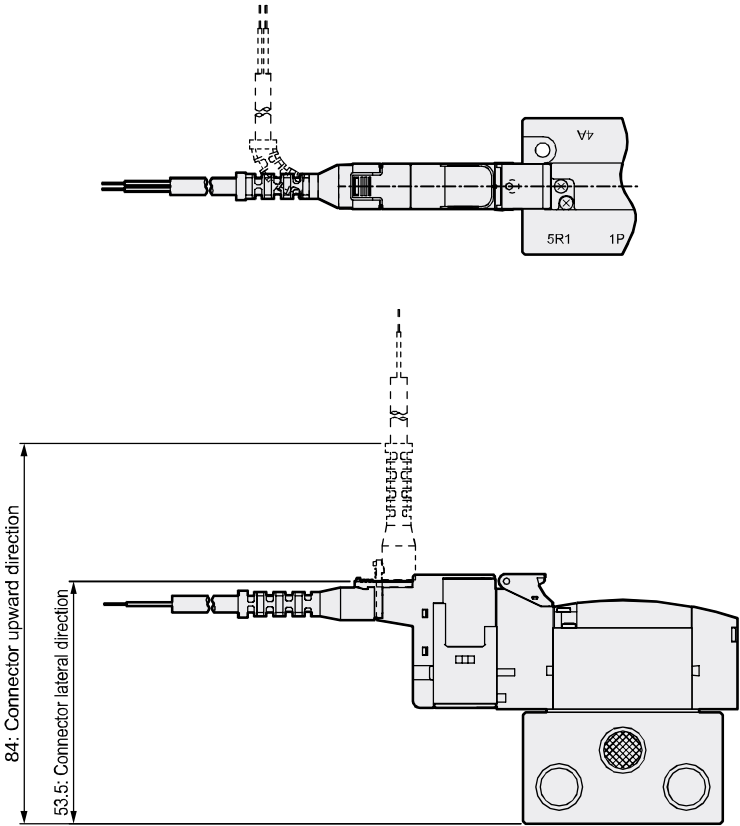
## Dimensions Port size; NPT thread

● E type connector (E)



Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



# 3GB2/4GB2 Series

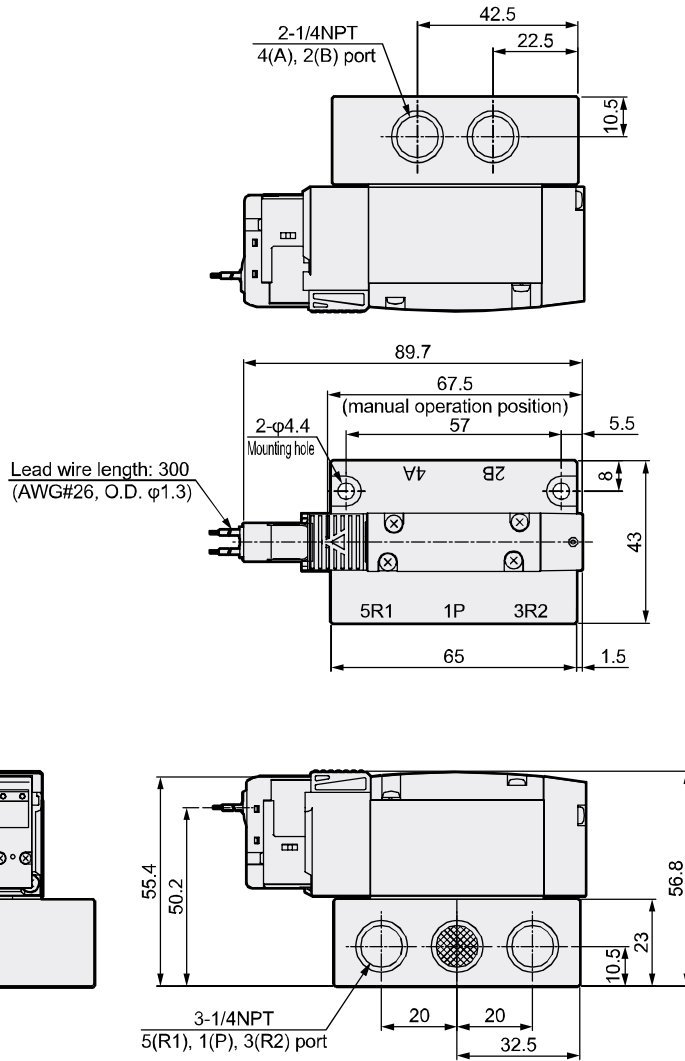
Single valve; base piping

Dimensions Port size; NPT thread

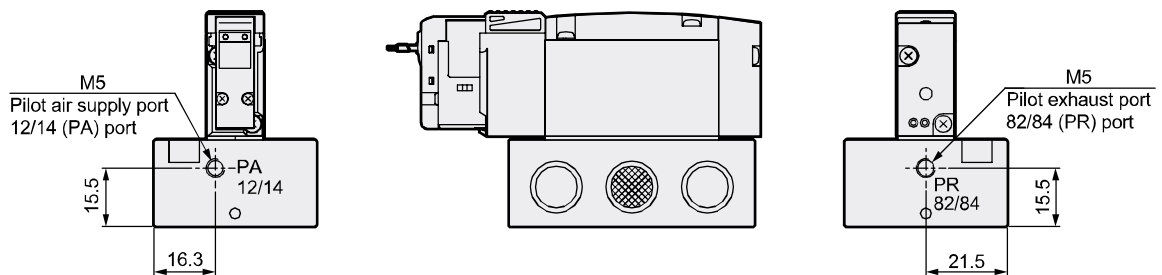
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

3GB2<sup>86</sup><sub>67</sub><sup>86</sup><sub>76</sub><sup>86</sup><sub>77</sub> 0R, 4GB2<sup>1</sup><sub>4</sub><sup>1</sup><sub>5</sub> 0R

● 2-position single grommet lead wire (blank)

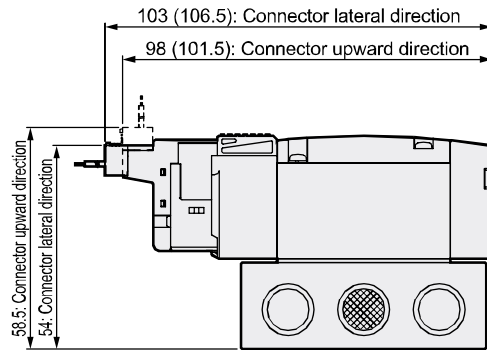


● External pilot (K)



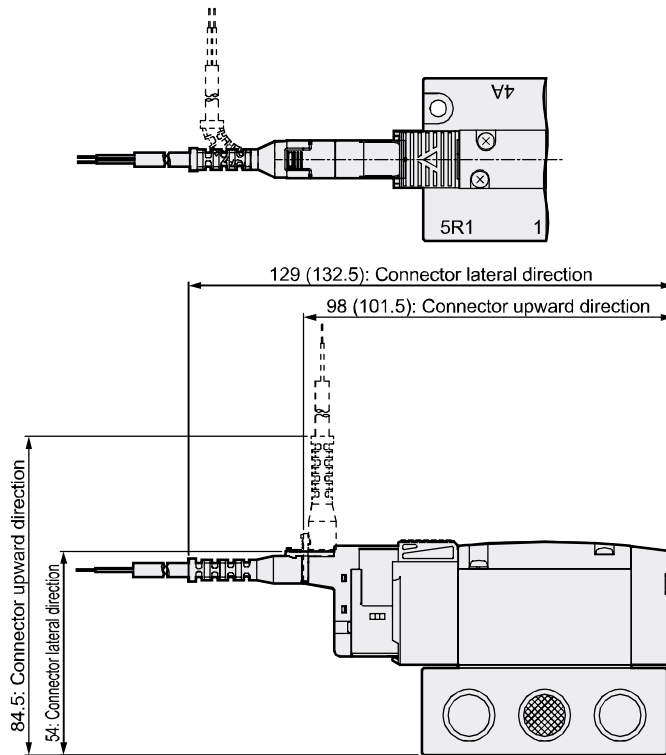
## Dimensions Port size; NPT thread

● E type connector (E)



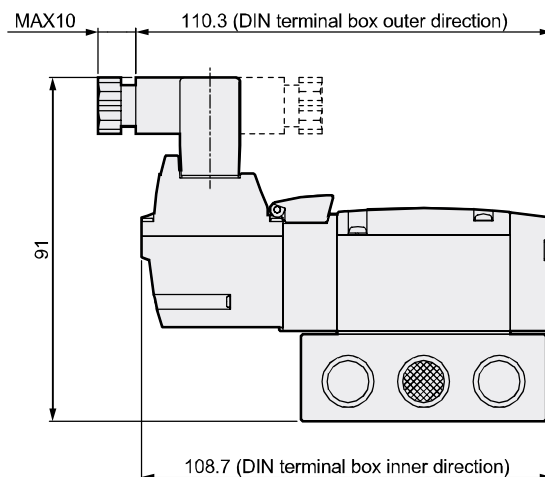
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 4GB3 Series

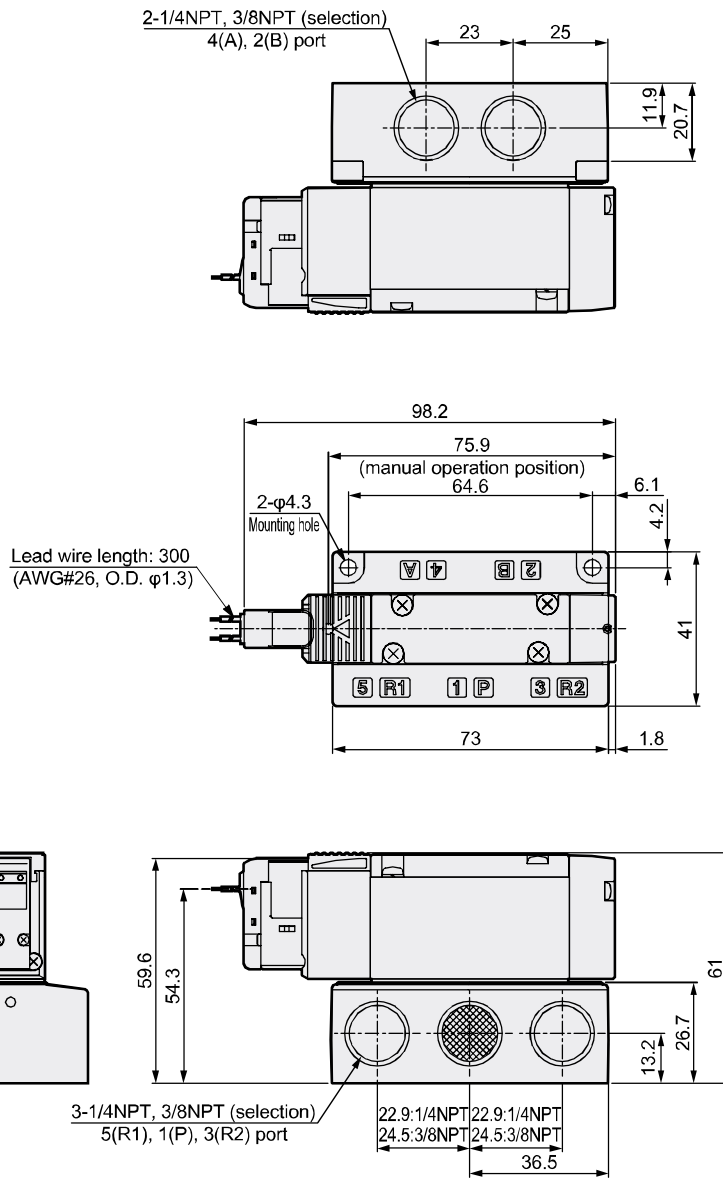
Single valve; base piping

Dimensions Port size; NPT thread

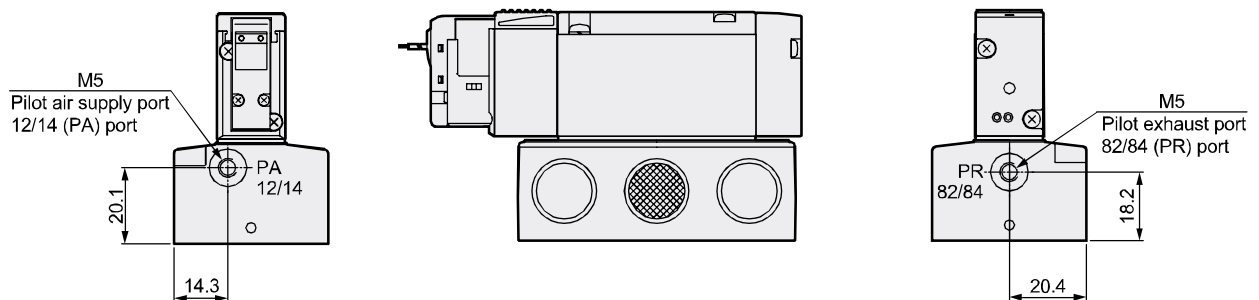
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

4GB3 0R

● 2-position single grommet lead wire (blank)

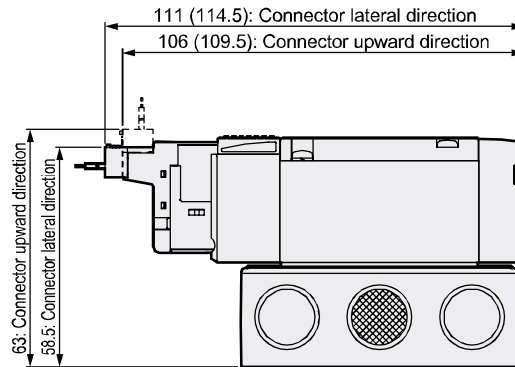


● External pilot (K)



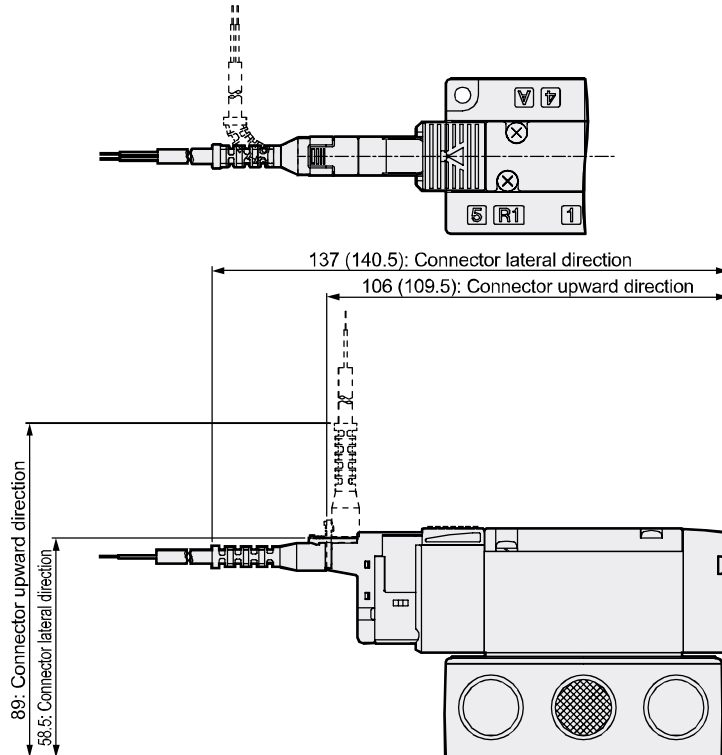
## Dimensions Port size; NPT thread

● E type connector (E)



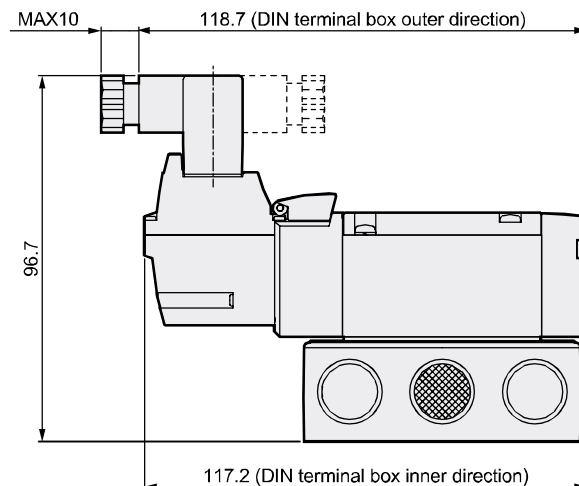
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 3GB1/4GB1 Series

Single valve; base piping

Dimensions Port size; G thread

4GA/B

M4GA/B

MN4GA/B

4GA/B (mastr)

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E

MN4E

W4GA/B2

W4GB4

4TB

4L2-4/

LMF0

MN3S0

MN4S0

4SA/B0

4KA/B

4KA/B (mastr)

4F

4F (mastr)

PV5G

GMF

PV5

GMF

PV5S-0

3QR

3QB

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP/

NVP

4F\*0EX

4F\*0E

HMV

HSV

2QV

3QV

SKH

PCD

Silencer

TotAirSys

(TotalAir)

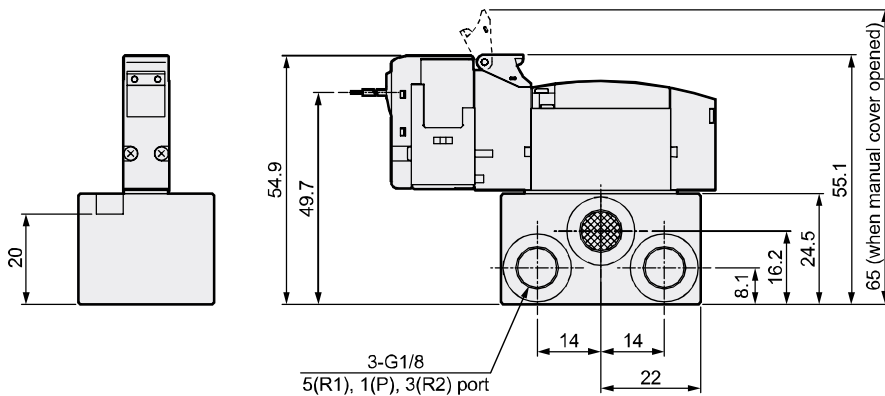
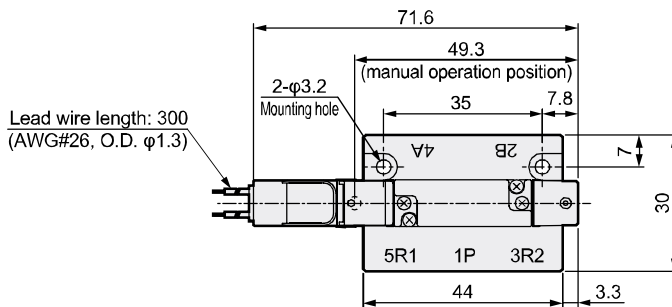
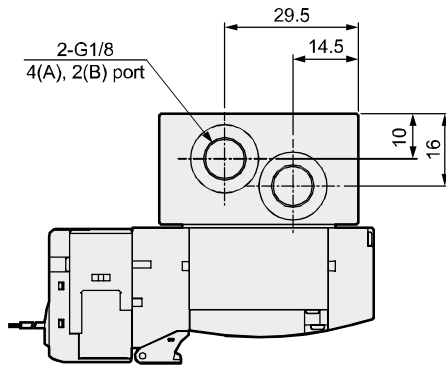
TotAirSys

(Gamma)

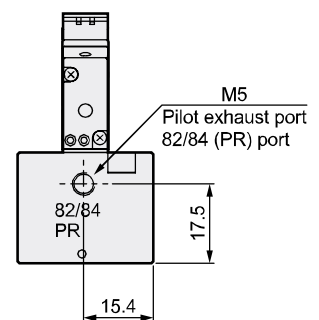
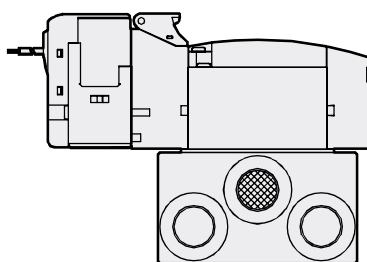
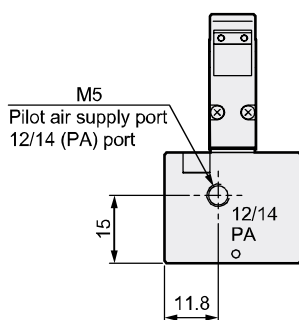
Ending

3GB1<sup>55</sup><sub>67</sub><sup>65</sup><sub>75</sub> OR, 4GB1<sup>55</sup><sub>67</sub><sup>65</sup><sub>75</sub> OR

● 2-position single grommet lead wire (blank)

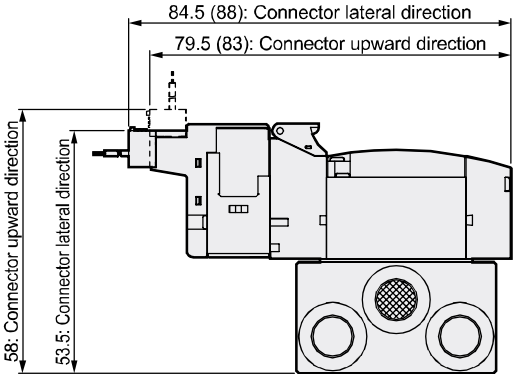


● External pilot (K)



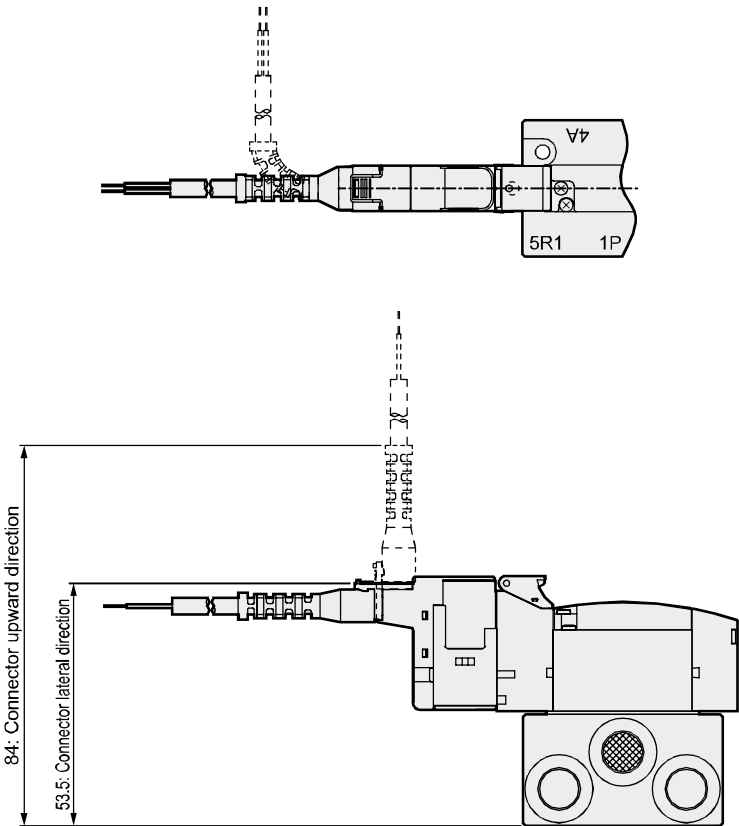
## Dimensions Port size; G thread

● E type connector (E)



Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# 3GB2/4GB2 Series

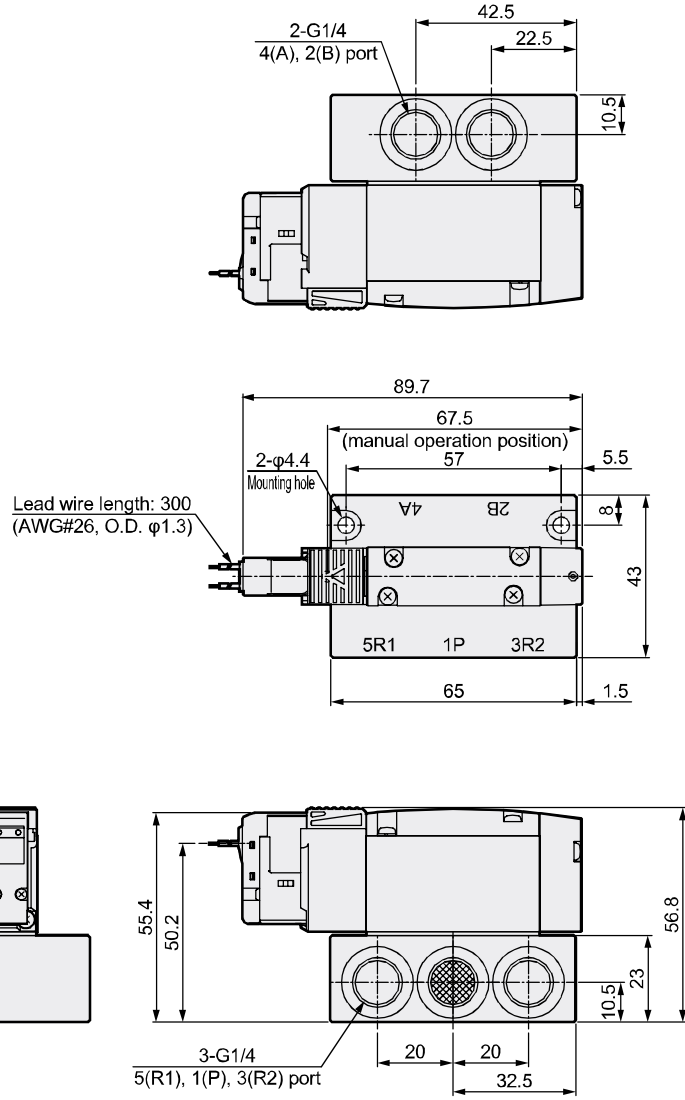
Single valve; base piping

Dimensions Port size; G thread

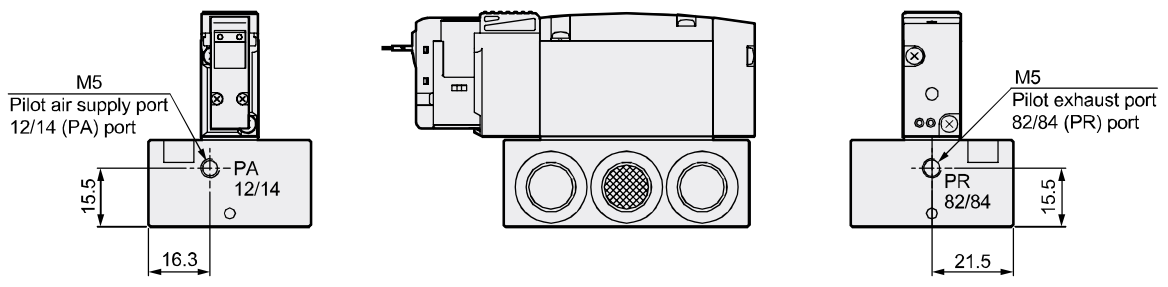
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (TotalAir)
TotAirSys (Gamma)
Ending

3GB2<sup>96</sup><sub>57</sub><sup>76</sup><sub>77</sub> 0R, 4GB2<sup>1</sup><sub>5</sub> 0R

● 2-position single grommet lead wire (blank)

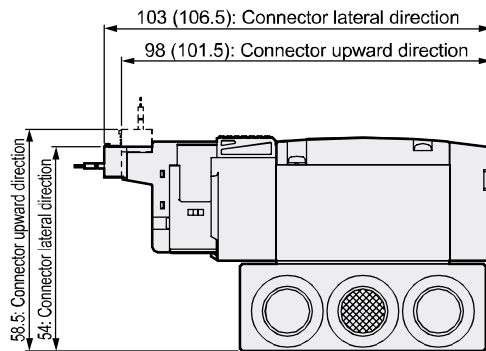


● External pilot (K)



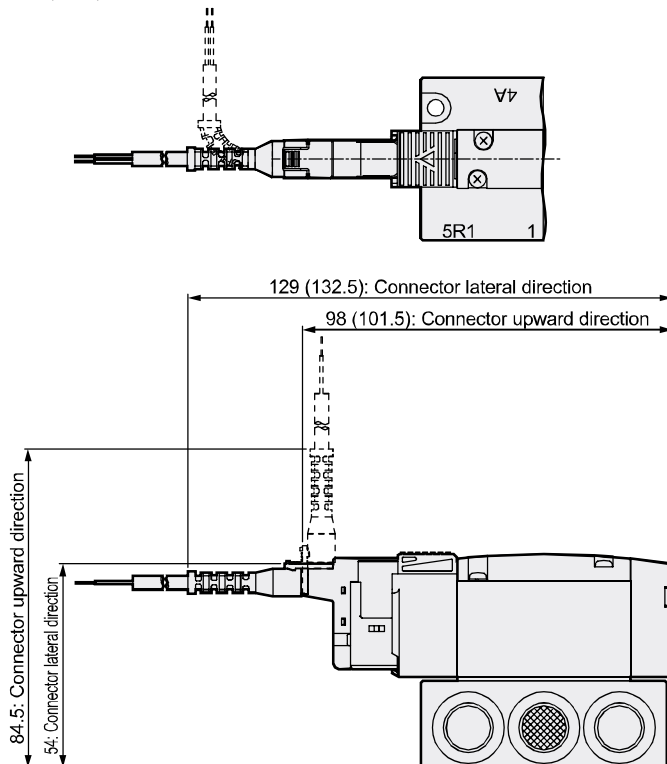
## Dimensions Port size; G thread

● E type connector (E)



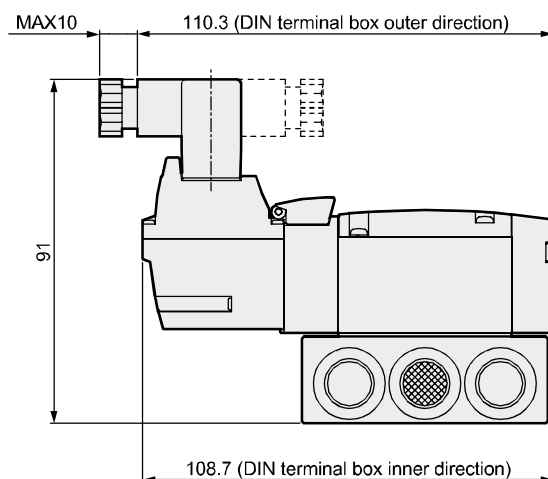
Note: Values in ( ) are for AC voltage.

● EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

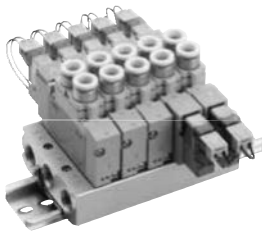
● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending





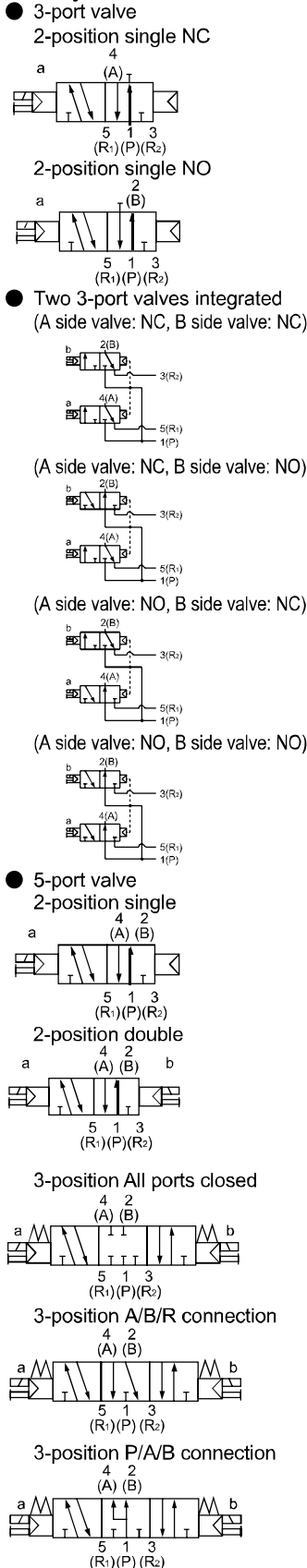
Individual wiring manifold  
Body piping  
Direct mount/DIN rail mount

# M3GA1/2/3-(D) / M4GA1/2/3-(D) Series

● Cylinder bore size:  $\phi 20$  to  $\phi 100$



## JIS symbol



## Manifold common specifications

Descriptions	Content	
Manifold	Integrated base	
Mounting method	Direct mount/DIN rail mount	
Supply and exhaust method	Common supply/common exhaust (With internal exhaust check valve)	
Pilot exhaust method	Internal pilot	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)
	External pilot	Main valve/pilot valve individual exhaust
Piping direction	Valve top direction	
Valve and operation	Pilot operated soft spool valve	
Working fluid	Compressed air	
Max. working pressure	MPa 0.7 ( $\approx 100$ psi, 7 bar)	
Min. working pressure	MPa 0.2 ( $\approx 29$ psi, 2 bar) (*3)	
Proof pressure	MPa 1.05 ( $\approx 150$ psi, 10.5 bar)	
Ambient temperature	$^{\circ}\text{C}$ $-5$ ( $23^{\circ}\text{F}$ ) to $55$ ( $131^{\circ}\text{F}$ ) (no freezing)	
Fluid temperature	$^{\circ}\text{C}$ $5$ ( $41^{\circ}\text{F}$ ) to $55$ ( $131^{\circ}\text{F}$ )	
Manual override	Non-locking/locking common type (standard)	
Lubrication	(*1) Not required	
Degree of protection	(*2) Dust-proof	
Vibration resistance	$\text{m/s}^2$ 50 or less	
Shock resistance	$\text{m/s}^2$ 300 or less	
Atmosphere	Cannot be used in corrosive gas environments	

\*1: Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.  
\*2: Avoid dripping water or oil, etc., during use. IP65 (jet-proof) applies for DIN terminal box specifications. However, the specified outer diameter of the applicable cord and tightening torque must be used for fixing in place.  
\*3: The working pressure range is 0 to 0.7 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

## Electrical specifications

Descriptions	Content	Content					
		DC24	DC12	DC5	DC3	AC100	AC200
Rated voltage	V						
Voltage fluctuation range		$\pm 10\%$					
Holding current	Standard	0.015	0.030	0.072	0.120	0.009	0.006
	A (*4)	(0.017)	(0.034)	(0.082)	(0.136)	(0.009)	(0.006)
Power consumption	Standard	0.35	0.40	0.35	0.40	-	-
	W (*4)	Low exoergic/energy circuit	0.005	0.010	-	-	-
Apparent power	Standard	-	-	-	-	0.93	1.40
	VA (*4) (*5)					(0.98)	
Thermal class		B					
Surge suppressor		Option					
Indicator		Lamp (option)					

\*4: Values in ( ) apply when lamp is included. In addition, the type with low exoergic/energy-saving circuit is only available with lamp.  
\*5: 200 VAC is the value of DIN terminal box (with lamp).

## Individual specifications

Descriptions	M3GA1/M4GA1		M3GA2/M4GA2		M3GA3/M4GA3			
	Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN rail mount		
Max. station No.	Standard (Internal pilot)	20 stations	16 stations	20 stations	16 stations	20 stations	16 stations	
	External pilot	12 stations	12 stations					
Port size	Rc thread, M5	A/B Port	Barbed fitting $\phi 1.8$ Push-in fitting $\phi 1.8, \phi 4, \phi 6$ M5	Push-in fitting $\phi 4, \phi 6, \phi 8$ Rc1/8	Push-in fitting $\phi 6, \phi 8, \phi 10$ Rc1/4			
		P/R1/R2 port	Rc1/8	Rc1/4	Rc3/8			
	NPT thread, M5	A/B Port	Push-in fitting $\phi 1/8"$ , $\phi 5/32"$ M5	Push-in fitting $\phi 1/4"$ , $\phi 5/16"$ 1/8NPT	Push-in fitting $\phi 3/8"$ , $\phi 1/2"$ 1/4NPT (*6)	Push-in fitting $\phi 3/8"$ , $\phi 1/2"$ 3/8NPT (*6)		
		P/R1/R2 port	1/8NPT	1/4NPT				
G thread, M5	A/B Port	Push-in fitting $\phi 4, \phi 6$ M5	Push-in fitting $\phi 4, \phi 6, \phi 8$ G1/8					
	P/R1/R2 port	G1/8	G1/4					
Manifold base weight calculation formula	Standard	23n+52	25n+60	47n+64	49n+92	74n+88	76n+117	
	External pilot	36n+105	38n+113	88n+135	90n+163	136n+194	138n+223	

\*6: Available as custom order.

Refer to "Cautions for Mounting the DIN Rail" (page 754), and select the manifold. For 10 or over manifold station No. (5 stations for 4G3), use ports on both side for air supply and exhaust. The manifold base weight is the value for screw specifications.

## Flow characteristics

Model No.	Solenoid position	P→A/B		A/B→R1/R2		
		C[dm <sup>3</sup> /(s·bar)]	b	C[dm <sup>3</sup> /(s·bar)]	b	
M3GA1 M4GA1	Two 3-port valves integrated	0.86	0.31	1.1(0.66)	0.19(0.22)	
	2-position	0.99	0.20	1.2(0.70)	0.20(0.12)	
	3-position	All ports closed	0.94	0.23	1.1 -	0.20 -
		ABR connection	0.93	0.18	1.3(0.70)	0.23(0.02)
		PAB connection	1.1	0.28	1.1 -	0.23 -
M3GA2 M4GA2	Two 3-port valves integrated	1.7	0.40	2.3(1.7)	0.29(0.32)	
	2-position	2.3	0.36	2.9(1.7)	0.24(0.33)	
	3-position	All ports closed	2.1	0.35	2.5 -	0.32 -
		ABR connection	2.2	0.37	2.9(1.8)	0.32(0.29)
		PAB connection	2.4	0.34	2.5 -	0.33 -
M3GA3 M4GA3	2-position	3.2	0.37	3.8(2.5)	0.13(0.28)	
	3-position	All ports closed	2.9	0.35	3.3 -	0.35 -
		ABR connection	3.0	0.34	3.8(2.6)	0.12(0.27)
		PAB connection	3.3	0.30	3.3 -	0.32 -

\*1: Effective cross-sectional area S and sonic conductance C are converted as  $S \approx 5.0 \times C$ .

\*2: Values in ( ) are with the exhaust check valve.

Ozone-proof specifications · Coolant proof specifications

Can be selected with "How to order" Item (E) option "A" on page 99.

Clean-room specifications

- Anti-dust generation structure for use in cleanrooms

\*\* - Voltage - **P7\***

Specifications for rechargeable battery (Catalog No. CC-1226A)

- For use in the rechargeable battery manufacturing process, materials used for air path and sliding section are limited

\*\* - Voltage - **P4**

CE marking specifications

\*\* - Voltage - **ST**

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# M4GA1/2/3 Series

Individual wiring manifold; body piping

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E  
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/  
LMF0
- MN3S0  
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G  
GMF
- PV5  
GMF
- PV5S-0
- 3QR  
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/  
NVP
- 4F\*0EX
- 4F\*0E
- HMV  
HSV
- 2QV  
3QV
- SKH
- PCD
- Silencer
- TotAirSys  
(TotalAir)
- TotAirSys  
(Gamma)
- Ending

## How to order

Manifold model No.

**M** **4GA1** **1** **0R** - **C6** - **E2** **H** **D** - **3**

3 port manifold model No.

**M** **3GA1** **1** **0R** - **C6** - **E2** **H** **D** - **3**

● Single valve for mounting base

**4GA1** **1** **9R** - **C6** - **E2** **H** - **3**

● 3-port discrete valve for mounting base

**3GA1** **1** **9R** - **C6** - **E2** **H** - **3**

**B** Solenoid position

**A** Model No.

**C** Port size

**D** Electrical connections

**E** Option

**F** Mount

**G** Station No.

**H** Voltage

\* Be sure to fill in the "Manifold specifications sheet" (pages 206 to 220).

		<b>A Model No.</b>						
		3GA1	3GA2	3GA3	4GA1	4GA2	4GA3	
<b>B Solenoid position</b>								
<b>1</b>	2-position single				●	●	●	
<b>2</b>	2-position double				●	●	●	
<b>3</b>	3-position all ports closed				●	●	●	
<b>4</b>	3-position ABR connection				●	●	●	
<b>5</b>	3-position PAB connection				●	●	●	
<b>1</b>	2-position single normally closed *1	●	●	●				
<b>11</b>	2-position single normally open *1	●	●	●				
<b>66</b>	A valve side: Normally closed B valve side: Normally closed	●	●					
<b>67</b>	Two 3-port valves integrated A valve side: Normally closed B valve side: Normally open	●	●					
<b>76</b>	*1/*2 A valve side: Normally open B valve side: Normally closed	●	●					
<b>77</b>	A valve side: Normally open B valve side: Normally open	●	●					
<b>8</b>	Mix manifold (when there are multiple solenoid positions)	●	●	●	●	●	●	
<b>C Port size</b>								
<b>Port</b>	4(A)/2(B) port	P/R1/R2 port (2) = Rc1/8 (3) = Rc1/4 (4) = Rc3/8						
<b>CF</b>	φ1.8 barbed fitting (compatible tube UP-9102-**) (2)				(2)			
<b>C18</b>	φ1.8 push-in fitting (compatible tube UP-9402-**) (2)				(2)			
<b>C4</b>	φ4 push-in fitting (2) (3)		(3)		(2)	(3)		
<b>C6</b>	φ6 push-in fitting (2) (3) (4)		(3)	(4)	(2)	(3)	(4)	
<b>C8</b>	φ8 push-in fitting (3) (4)		(3)	(4)		(3)	(4)	
<b>C10</b>	φ10 push-in fitting (4)			(4)			(4)	
<b>CX</b>	Push-in fitting mix *3 (2) (3) (4) (2) (3) (4)		(2)	(3)	(4)	(2)	(3)	(4)
<b>M5</b>	M5 (2)		(2)					
<b>06</b>	Rc1/8 (3)		(3)				(3)	
<b>08</b>	Rc1/4 (4)			(4)			(4)	
<b>Port</b>	4(A)/2(B) port	P/R1/R2 port (5) = 1/8NPT, (6) = 1/4NPT, (7) = 3/8NPT						
<b>C3N</b>	φ1/8" push-in fitting (5)				(5)			
<b>C4N</b>	φ5/32" push-in fitting (5)				(5)			
<b>C6N</b>	φ1/4" push-in fitting (6)			(6)			(6)	
<b>C8N</b>	φ5/16" push-in fitting (6) (7)			(6)	(7)		(6) (7)	
<b>C10N</b>	φ3/8" push-in fitting (7)			(7)			(7)	
<b>CXN</b>	Push-in fitting mix *3 (5) (6) (7) (5) (6) (7)		(5)	(6)	(7)	(5)	(6)	(7)
<b>M5N</b>	M5 (5)		(5)				(5)	
<b>06N</b>	1/8NPT (6)			(6)			(6)	
<b>08N</b>	1/4 NPT *4 (7)			(7)			(7)	
<b>Port</b>	4(A)/2(B) port	P/R1/R2 port (8) = G1/8, (9) = G1/4						
<b>C4G</b>	φ4 push-in fitting (8) (9)			(8)	(9)			
<b>C6G</b>	φ6 push-in fitting (8) (9)			(8)	(9)			
<b>C8G</b>	φ8 push-in fitting (9)			(9)			(9)	
<b>CXG</b>	Push-in fitting mix *3 (8) (9) (8) (9)		(8)	(9)	(8)	(9)		
<b>M5G</b>	M5 (8)		(8)				(8)	
<b>06G</b>	G1/8 (9)			(9)			(9)	

## ⚠ Precautions for model No. selection

- \*1: Select M4GA\*80R when mixing with 3, 5-port valves.  
Further, select M3GA\*80R when mixing with masking plate.
- \*2: Not compatible with combination with external pilot (K).  
Dimensions are the same as those of the respective 2-position double solenoid.
- \*3: The push-in fitting cannot be mixed with the single valve's 4(A) or 2(B) port.
- \*4: Custom order.

# M4GA1/2/3 Series

Individual wiring manifold; body piping

		A Model No.					
		3GA1	3GA2	3GA3	4GA1	4GA2	4GA3
<b>D Electrical connections</b>							
Blank	Grommet lead wire (300 mm)	*13	●	●	●	●	●
B	DIN terminal box (Pg7) with surge suppressor/lamp	*14	●	●	●	●	●
BN	DIN terminal box (Pg7) (without terminal box) with surge suppressor	*14	●	●	●	●	●
E type connector (upward/lateral common)							
E0	Lead wire (300 mm)	*15	●	●	●	●	●
E00	Lead wire (500 mm)	*15	●	●	●	●	●
E01	Lead wire (1000 mm)	*15	●	●	●	●	●
E02	Lead wire (2000 mm)	*15	●	●	●	●	●
E03	Lead wire (3000 mm)	*15	●	●	●	●	●
E0N	Without lead wire (without socket)	*15	●	●	●	●	●
E1	Without lead wire (socket/terminal attached)	*15	●	●	●	●	●
E2	Lead wire (300 mm), surge suppressor/indicator lamp		●	●	●	●	●
E20	Lead wire (500 mm), surge suppressor/indicator lamp		●	●	●	●	●
E21	Lead wire (1000 mm), surge suppressor/indicator lamp		●	●	●	●	●
E22	Lead wire (2000 mm), surge suppressor/indicator lamp		●	●	●	●	●
E23	Lead wire (3000 mm), surge suppressor/indicator lamp		●	●	●	●	●
E2N	No lead wire (without socket), surge suppressor/indicator lamp		●	●	●	●	●
E3	No lead wire (with socket/terminal), surge suppressor/indicator lamp		●	●	●	●	●
EJ type connector (socket with cover, upward/lateral common)							
E01J	Lead wire (1000 mm)	*15	●	●	●	●	●
E02J	Lead wire (2000 mm)	*15	●	●	●	●	●
E03J	Lead wire (3000 mm)	*15	●	●	●	●	●
E21J	Lead wire (1000 mm), surge suppressor/indicator lamp		●	●	●	●	●
E22J	Lead wire (2000 mm), surge suppressor/indicator lamp		●	●	●	●	●
E23J	Lead wire (3000 mm), surge suppressor/indicator lamp		●	●	●	●	●
<b>E Option</b>							
Blank	Non-locking/locking common manual override		●	●	●	●	●
M	Non-locking manual override		●	●	●	●	●
H	With exhaust check valve	*5	●	●	●	●	●
K	External pilot	*6	●	●	●	●	●
A	Ozone/coolant proof		●	●	●	●	●
S	Surgeless	*7	●	●	●	●	●
E	Low exoergic/energy saving circuit	*7, *8	●	●	●	●	●
F	A/B port filter built in	*9	●	●	●	●	●
Z1	Air supply spacer	*10	●	●	●	●	●
Z2	In-stop valve spacer	*10, *11	●	●	●	●	●
Z3	Exhaust spacer	*10	●	●	●	●	●
<b>F Mount</b>							
Blank	Direct mount		●	●	●	●	●
D	DIN rail mount		●	●	●	●	●
<b>G Station No.</b>							
2	2 stations		●	●	●	●	●
to	to		●	●	●	●	●
20	Refer to page 90 for the max. station number per model		●	●	●	●	●
<b>H Voltage</b>							
1	100 VAC (rectifier integrated)		●	●	●	●	●
2	200 VAC (rectifier integrated)	*12	●	●	●	●	●
3	24 VDC		●	●	●	●	●
4	12 VDC		●	●	●	●	●
7	3 VDC		○	○	○	○	○
8	5 VDC		○	○	○	○	○

○ is not available.

● indicates a custom order.

- \*5 : 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). Refer to page 751 for details on the exhaust check valve.
- \*6 : Contact CKD when using a vacuum with the external pilot (K).
- \*7 : E2\* type and E2\*J type connectors support 12/24 VDC only.  
In addition, surgeless "S" and low exoergic/energy-saving circuit "E" cannot be selected together.
- \*8 : Surgeless specifications.
- \*9 : A filter is built into the P-port as standard.
- \*10 : Specify the spacer mounting position/quantity in manifold specifications sheet.  
Stacking of spacers is not possible.  
Combination with the masking plate is not supported.  
Refer to pages 186 to 190 for details.
- \*11 : Not compatible with combination with external pilot (K).
- \*12 : DIN terminal box only is supported.
- \*13 : The grommet lead wire specifications are compatible with DC voltage only.
- \*14 : AC voltages and 12/24 VDC are supported. In addition, a lamp comes with the terminal box.
- \*15 : AC voltage is with a rectifier circuit.

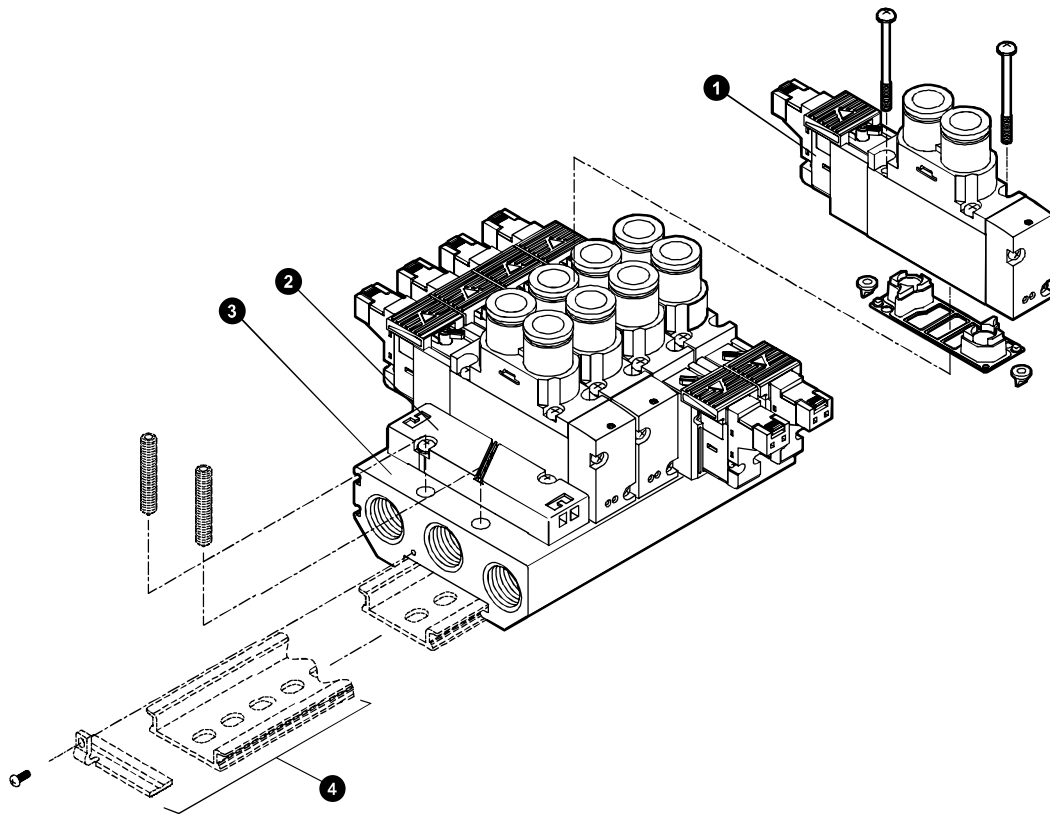
Electrical connections		Discrete valve/individual wiring manifold	
Blank	Grommet lead wire	E1 E3	E type connector with socket/terminal
● Lead wire length 300 mm			
E0 E2	E type connector	B	DIN terminal box
● Lead wire length 300 mm 500 mm 1000 mm 2000 mm 3000 mm			
E0N E2N	E type connector without socket	BN	DIN terminal box (Without terminal box)
E0*J E2*J	EJ type connector		
● Lead wire length 1 m 2 m 3 m			

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# M4GA1/2/3 Series

Individual wiring manifold; body piping

## Manifold components explanation and parts list



### Main parts list

No.	Component name	Model No.	Content	Remarks
1	Discrete valve for mounting base	4GA□□9R- <small>Port size</small> - <small>Electrical connections</small> - <small>Option</small> - <small>voltage</small> <small>Solenoid position</small> <small>Series flow rate size</small>	Single valve Gasket Mounting screws 2 PR check valve 2	Details on page 98
2	Masking plate	3G1/4G1 4G1R-MP 3G2/4G2 4G2R-MP 3G3/4G3 4G3R-MP	Masking plate Gasket Mounting screws 2	* 3G3/4G3 have two PR check valves.
3	Manifold base assembly	M4GA□□R-00- <small>Option</small> - <small>station No.</small> <small>Series flow rate size</small>	Manifold base	
4	DIN rail kit			Details on page 197

### Parts list

No.	Part name	Model No.	No.	Part name	Model No.
-	Coil assembly	4GR- <small>electrical connections</small> -□-COIL- <small>voltage</small> <small>Blank: Standard</small> <small>A: Ozonol/coolant proof</small> <small>S: Surgeless</small> <small>E: Low exoergic/energy saving circuit</small> <small>Select from Electrical connections (D) on page 98</small>		Cartridge push-in fitting and related parts	φ1.8 barbed 4G1R-JOINT-CF
			φ1.8 axial 4G1R-JOINT-C18		
			φ4 straight 4G1R-JOINT-C4		
			φ6 straight 4G1R-JOINT-C6		
			φ1/8" straight 4G1R-JOINT-C3N		
			φ5/32" straight 4G1R-JOINT-C4N		
			Plug cartridge 4G1R-JOINT-CPG		
			φ4 straight 4G2R-JOINT-C4		
			φ6 straight 4G2R-JOINT-C6		
			φ8 straight 4G2R-JOINT-C8		
			φ1/4" straight 4G2R-JOINT-C6N		
			φ5/16" straight 4G2R-JOINT-C8N		
			Plug cartridge 4G2R-JOINT-CPG		
			φ6 straight 4G3R-JOINT-C6		
			φ8 straight 4G3R-JOINT-C8		
			φ10 straight 4G3R-JOINT-C10		
			φ5/16" straight 4G3R-JOINT-C8N		
			φ3/8" straight 4G3R-JOINT-C10N		
			Plug cartridge 4G3R-JOINT-CPG		

# M4GA1 Series

Individual wiring manifold; body piping

## Dimensions



4GA/B

M4GA/B

MN4GA/B

4GA/B (mastr)

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E  
MN4E

W4GA/B2

W4GB4

4TB

4L2-4/  
LMF0

MN3S0  
MN4S0

4SA/B0

4KA/B  
4KA/B (mastr)

4F

4F (mastr)

PV5G  
GMF

PV5  
GMF

PV5S-0

3QR  
3QB

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP/  
NVP

4F\*0EX

4F\*0E

HMV  
HSV

2QV  
3QV

SKH

PCD

Silencer

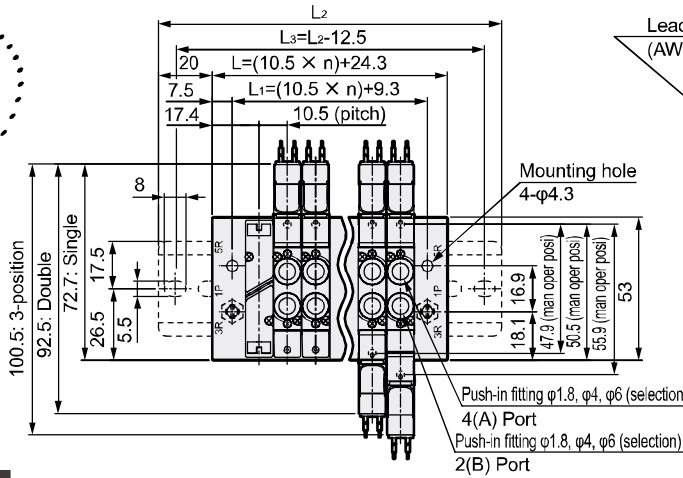
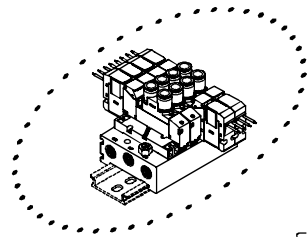
TotAirSys  
(TotalAir)

TotAirSys  
(Gamma)

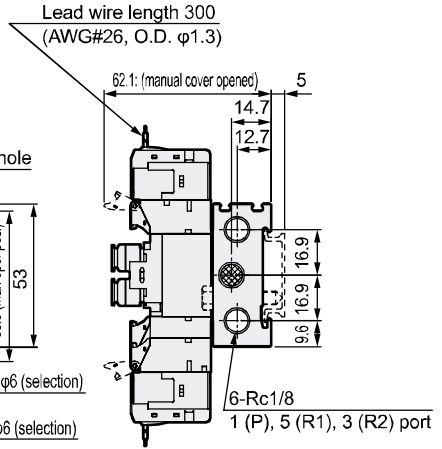
Ending

### M4GA1

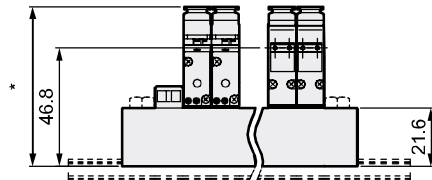
- Grommet lead wire (blank)



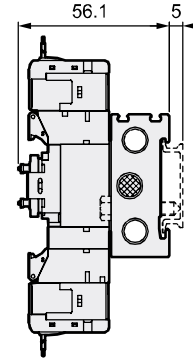
\* For the 2-position single 3-port valve, either A port or B port is a plug.  
In addition, the two 3-port valve integrated has the same dimensions as the double model.



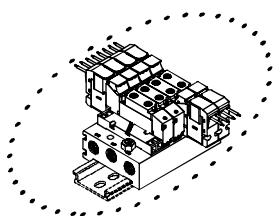
Push-in fitting bore size	* Dimensions
$\phi 1.8$	54
$\phi 4$	58
$\phi 6$	59.2
$\phi 1/8"$	58.5
$\phi 5/32"$	58



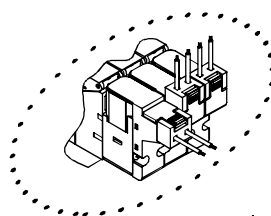
- $\phi 1.8$  barbed fitting (CF)



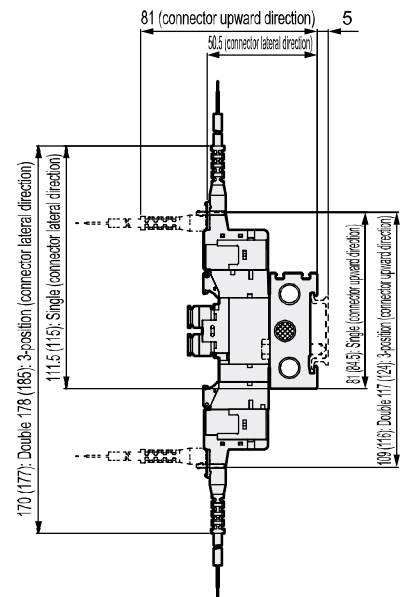
- M5 female thread (M5)



- E type connector (E)



- EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

Strn No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	45.3	55.8	66.3	76.8	87.3	97.8	108.3	118.8	129.3	139.8	150.3	160.8	171.3	181.8	192.3	202.8	213.3	223.8	234.3
L <sub>1</sub>	30.3	40.8	51.3	61.8	72.3	82.8	93.3	103.8	114.3	124.8	135.3	145.8	156.3	166.8	177.3	187.8	198.3	208.8	219.3
L <sub>2</sub>	87.5	100.0	112.5	125.0	137.5	150.0	150.0	162.5	175.0	187.5	200.0	212.5	212.5	225.0	237.5				
L <sub>3</sub>	75.0	87.5	100.0	112.5	125.0	137.5	137.5	150.0	162.5	175.0	187.5	200.0	200.0	212.5	225.0				

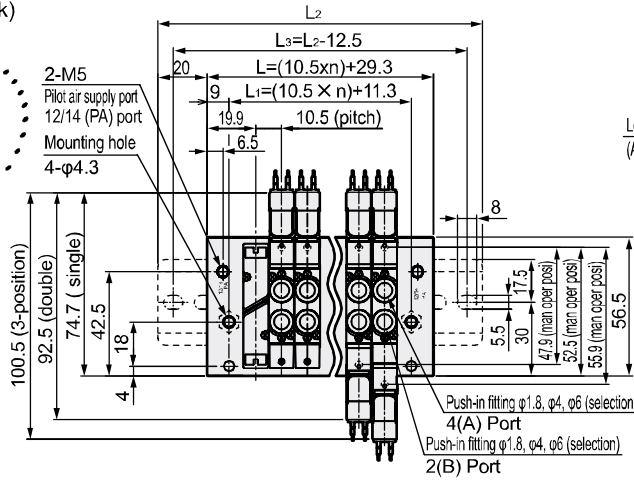
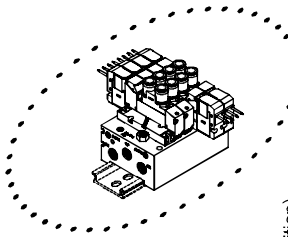
# M4GA1 Series

Individual wiring manifold; body piping

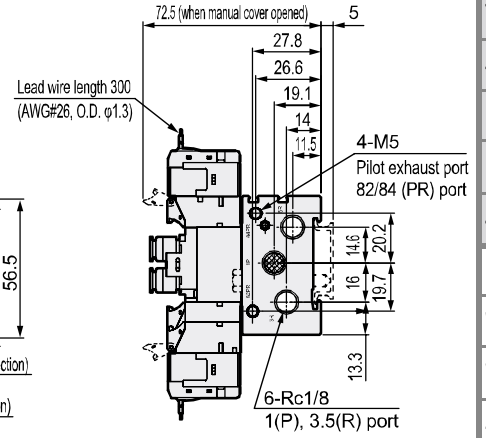
## Dimensions

### M4GA1

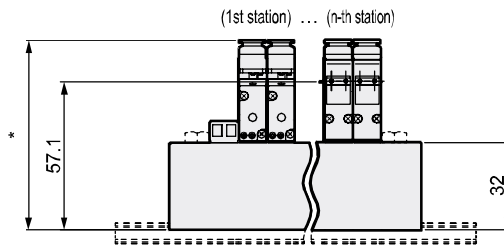
- External pilot (K)  
Grommet lead wire (blank)



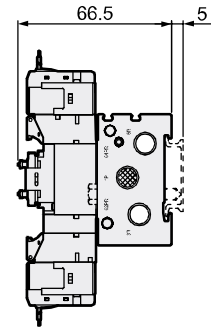
\* For the 2-position single 3-port valve, either A port or B port is a plug.



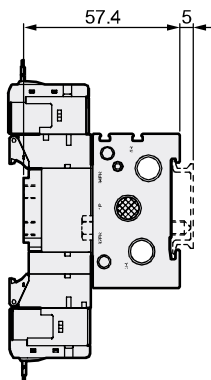
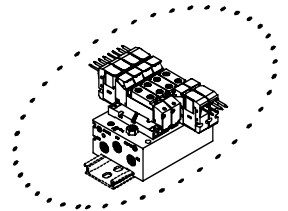
Push-in fitting bore size	* Dimensions
φ1.8	64.4
φ4	68.4
φ6	69.6
φ1/8"	68.9
φ5/32"	68.4



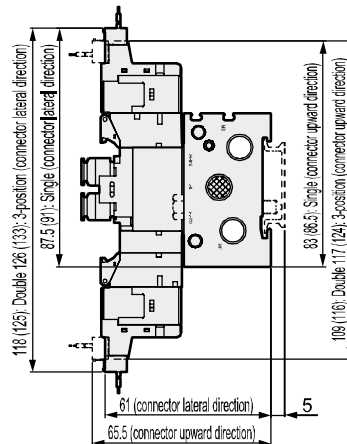
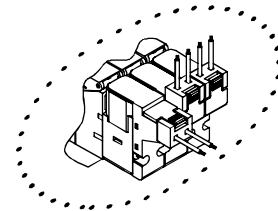
- φ1.8 barbed fitting (CF)



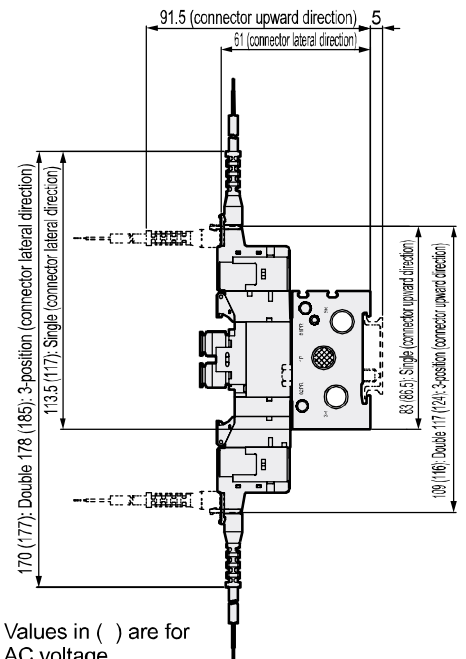
- External pilot (K)  
M5 female thread (M5)



- External pilot (K)  
E type connector (E)



- External pilot (K)  
EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

Stn No.	2	3	4	5	6	7	8	9	10	11	12
L	50.3	60.8	71.3	81.8	92.3	102.8	113.3	123.8	134.3	144.8	155.3
L <sub>1</sub>	32.3	42.8	53.3	63.8	74.3	84.8	95.3	105.8	116.3	126.8	137.3
L <sub>2</sub>	100.0	112.5	112.5	125.0	137.5	150.0	162.5	175.0	175.0	187.5	200.0
L <sub>3</sub>	87.5	100.0	100.0	112.5	125.0	137.5	150.0	162.5	162.5	175.0	187.5

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# M4GA2 Series

Individual wiring manifold; body piping

## Dimensions



4GA/B

M4GA/B

MN4GA/B

4GA/B (mastr)

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E  
MN4E

W4GA/B2

W4GB4

4TB

4L2-4/  
LMF0

MN3S0  
MN4S0

4SA/B0

4KA/B

4KA/B (mastr)

4F

4F (mastr)

PV5G  
GMF

PV5  
GMF

PV5S-0

3QR  
3QB

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP/  
NVP

4F\*0EX

4F\*0E

HMV  
HSV

2QV  
3QV

SKH

PCD

Slencer

TotAirSys  
(TotalAir)

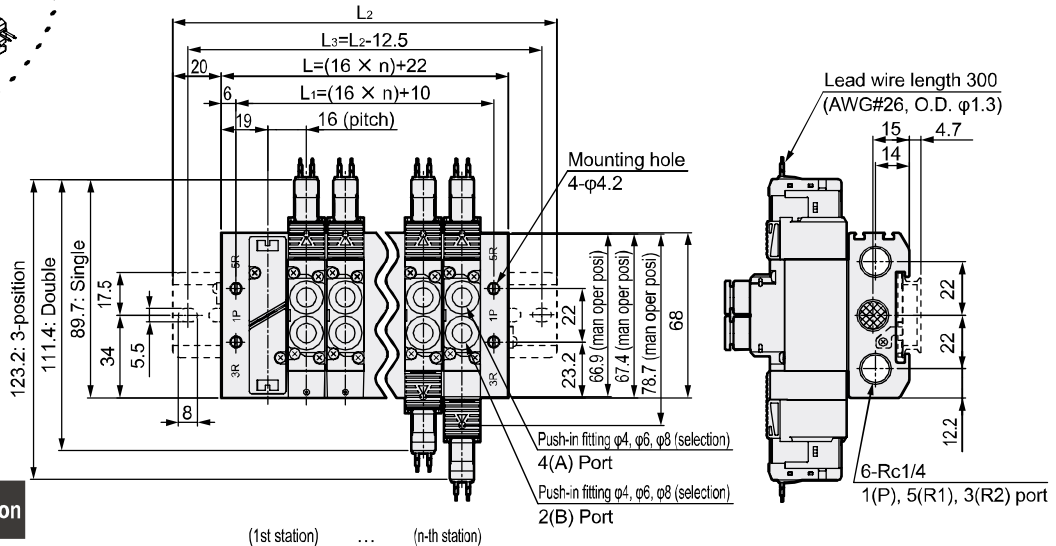
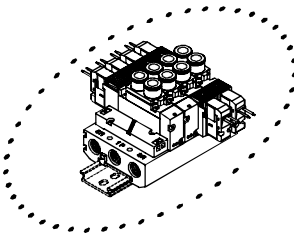
TotAirSys  
(Gamma)

Ending

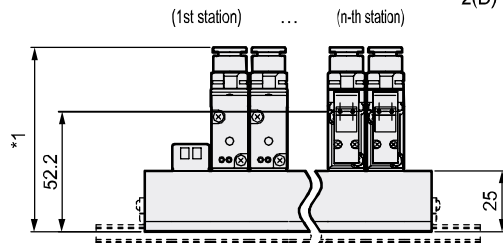
### M4GA2

- Grommet lead wire (blank)

\* For the 2-position single 3-port valve, either A port or B port is a plug.  
In addition, the two 3-port valve integrated has the same dimensions as the double model.

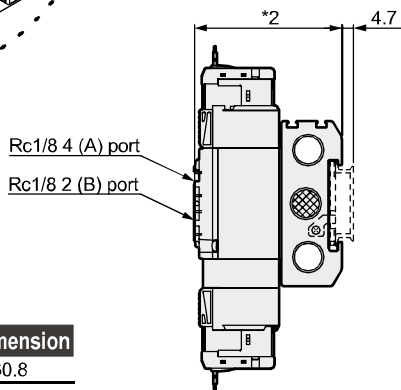
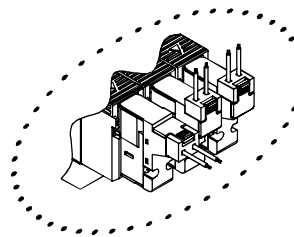
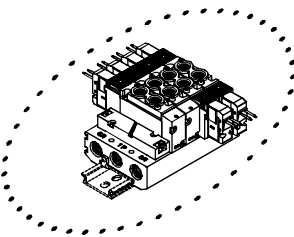


Push-in fitting Bore size	*1 dimension
$\phi 4$	76
$\phi 6$	
$\phi 8$	
$\phi 1/4"$	76.9
$\phi 5/16"$	76.2

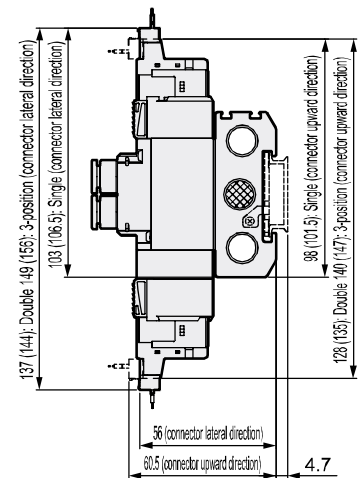


- Rc1/8 female thread (06)

- E type connector (E)



Note: Values in ( ) are for AC voltage.



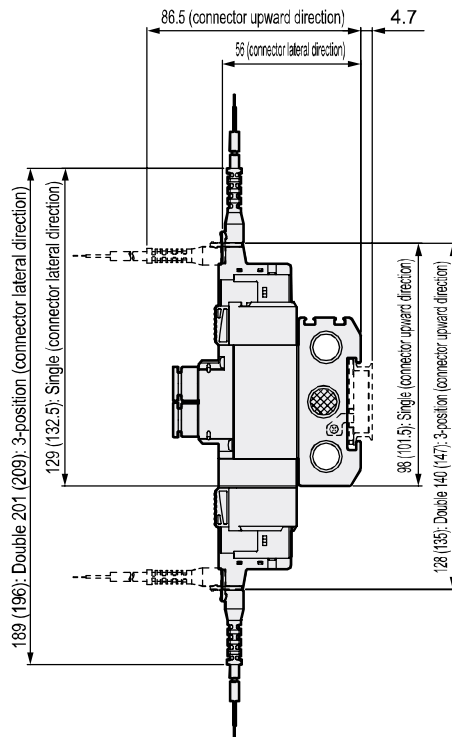
Female thread bore size	*2 dimension
Rc1/8	60.8
1/8NPT	62.1
G1/8	

Strn No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	54.0	70.0	86.0	102.0	118.0	134.0	150.0	166.0	182.0	198.0	214.0	230.0	246.0	262.0	278.0	294.0	310.0	326.0	342.0
L <sub>1</sub>	42.0	58.0	74.0	90.0	106.0	122.0	138.0	154.0	170.0	186.0	202.0	218.0	234.0	250.0	266.0	282.0	298.0	314.0	330.0
L <sub>2</sub>	100.0	112.5	137.5	150.0	162.5	175.0	200.0	212.5	225.0	250.0	262.5	275.0	287.5	312.5	325.0				
L <sub>3</sub>	87.5	100.0	125.0	137.5	150.0	162.5	187.5	200.0	212.5	237.5	250.0	262.5	275.0	300.0	312.5				



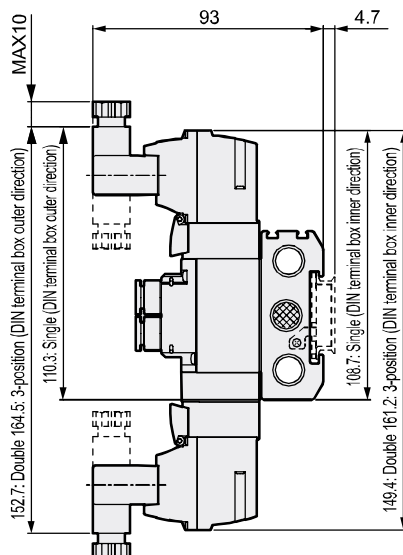
### Dimensions

- EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

- DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# M4GA2 Series

Individual wiring manifold; body piping

## Dimensions

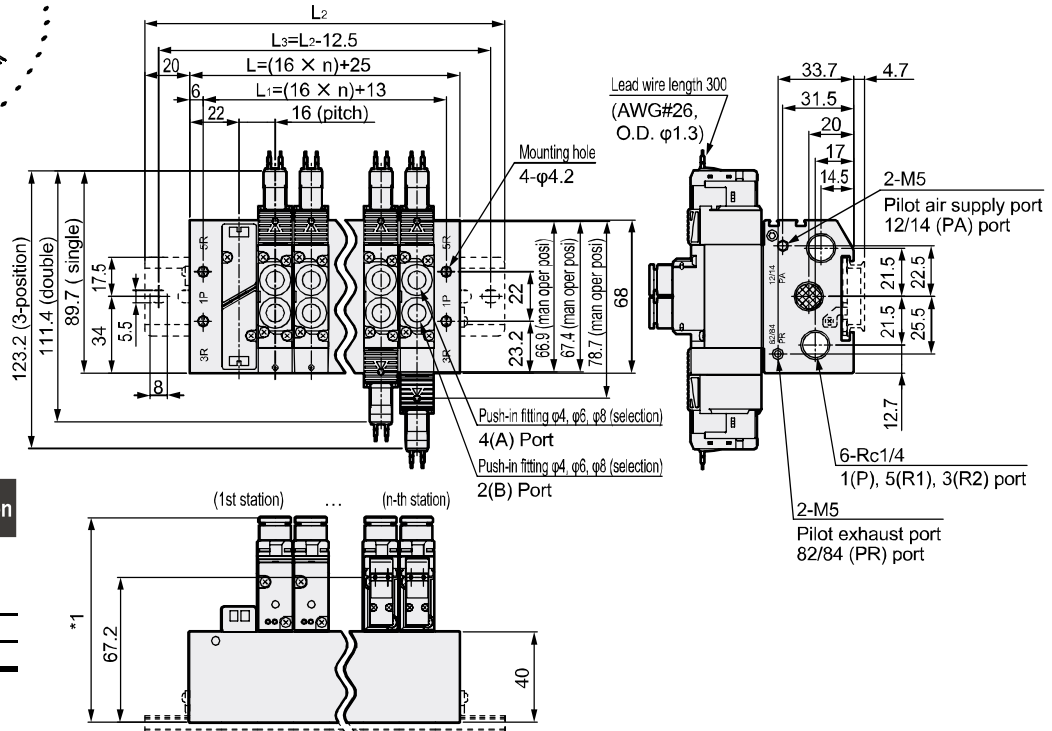
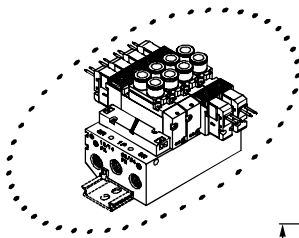


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E  
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/  
LMF0
- MN3S0  
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G  
GMF
- PV5  
GMF
- PV5S-0
- 3QR  
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/  
NVP
- 4F\*0EX
- 4F\*0E
- HMV  
HSV
- 2QV  
3QV
- SKH
- PCD
- Slencer
- TotAirSys (TotalAir)
- TotAirSys (Gamma)
- Ending

### M4GA2

- External pilot (K)  
Grommet lead wire (blank)

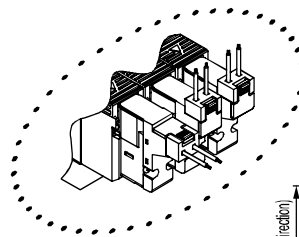
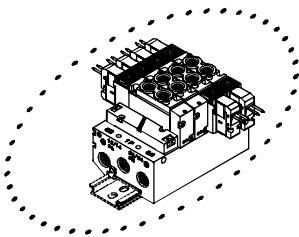
\* For the 2-position single 3-port valve, either A port or B port is a plug.



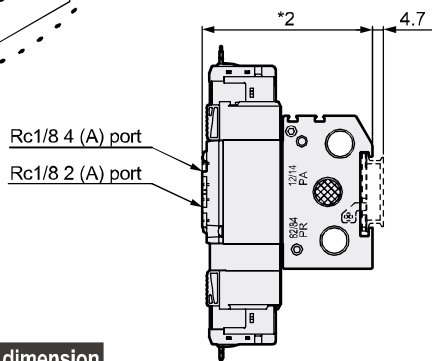
Push-in fitting bore size	*1 dimension
φ4	91
φ6	
φ8	
φ1/4"	91.9
φ5/16"	91.2

- External pilot (K)  
Rc1/8 female thread (06)

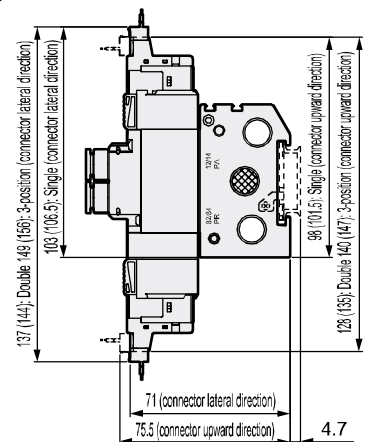
- External pilot (K)  
E type connector (E)



Note: Values in ( ) are for AC voltage.



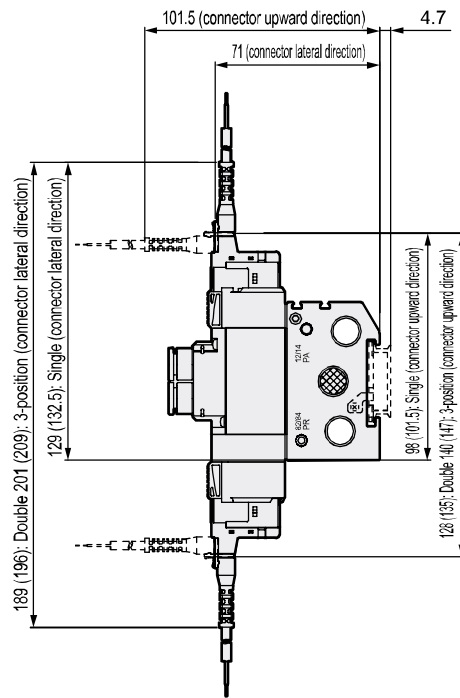
Female thread bore size	*2 dimension
Rc1/8	75.8
1/8NPT	77.1
G1/8	



Strn No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	57.0	73.0	89.0	105.0	121.0	137.0	153.0	169.0	185.0	201.0	217.0	233.0	249.0	265.0	281.0	297.0	313.0	329.0	345.0
L <sub>1</sub>	45.0	61.0	77.0	93.0	109.0	125.0	141.0	157.0	173.0	189.0	205.0	221.0	237.0	253.0	269.0	285.0	301.0	317.0	333.0
L <sub>2</sub>	100.0	125.0	137.5	150.0	162.5	187.5	200.0	212.5	225.0	250.0	262.5	275.0	300.0	312.5	325.0				
L <sub>3</sub>	87.5	112.5	125.0	137.5	150.0	175.0	187.5	200.0	212.5	237.5	250.0	262.5	287.5	300.0	312.5				

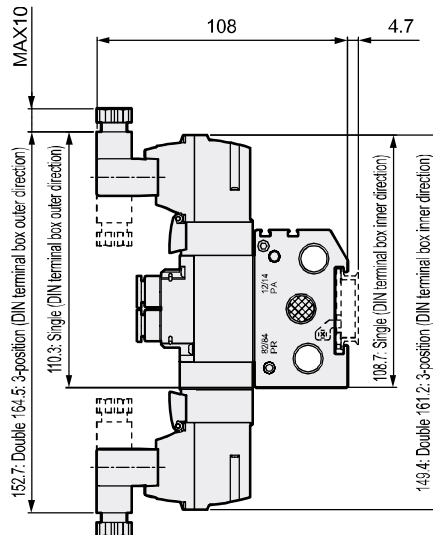
### Dimensions

- External pilot (K)  
EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

- External pilot (K)  
DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# M4GA3 Series

Individual wiring manifold; body piping

## Dimensions

4GA/B

M4GA/B

MN4GA/B

4GA/B (mastr)

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E  
MN4E

W4GA/B2

W4GB4

4TB

4L2-4/  
LMF0

MN3S0  
MN4S0

4SA/B0

4KA/B

4KA/B (mastr)

4F

4F (mastr)

PV5G  
GMF

PV5  
GMF

PV5S-0

3QR  
3QB

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP/  
NVP

4F\*0EX

4F\*0E

HMV  
HSV

2QV  
3QV

SKH

PCD

4F\*0EX

4F\*0E

HMV  
HSV

2QV  
3QV

SKH

PCD

4F\*0EX

4F\*0E

HMV  
HSV

2QV  
3QV

SKH

PCD

4F\*0EX

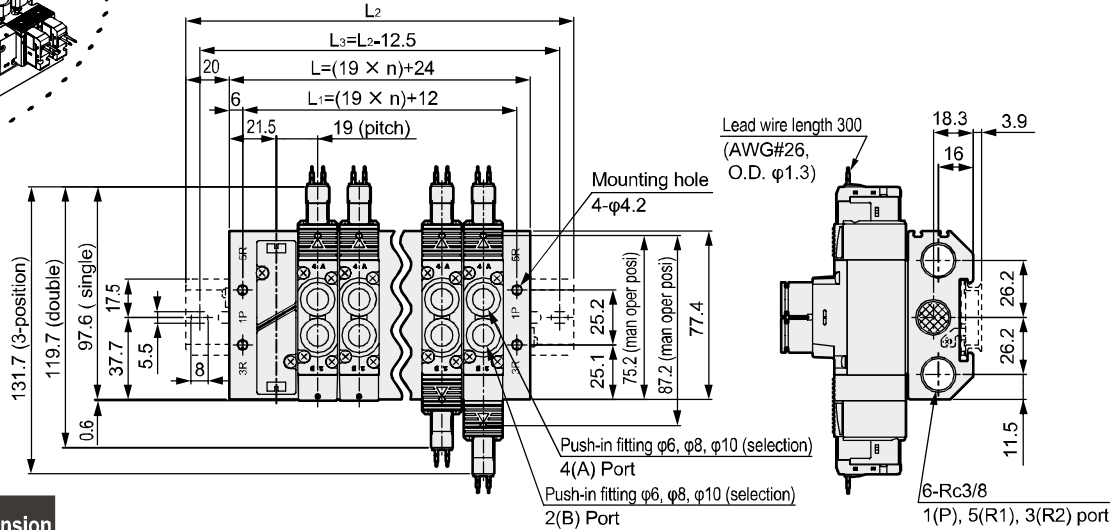
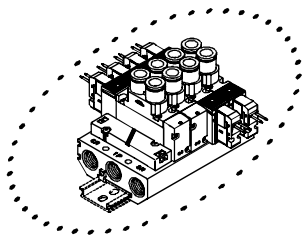
4F\*0E

HMV  
HSV

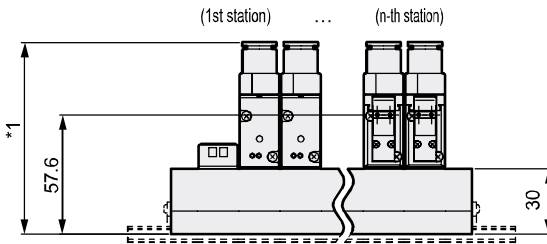
### M4GA3

- Grommet lead wire (blank)

\* For the 2-position single 3-port valve, either A port or B port is a plug.

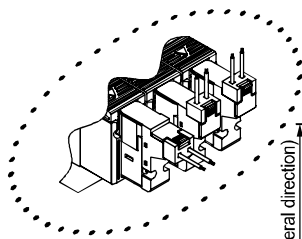
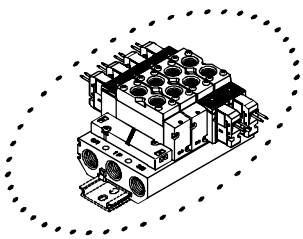


Push-in fitting bore size	*1 dimension
$\phi 6$	82.8
$\phi 8$	88.3
$\phi 10$	88.3
$\phi 5/16"$	89
$\phi 3/8"$	92.2

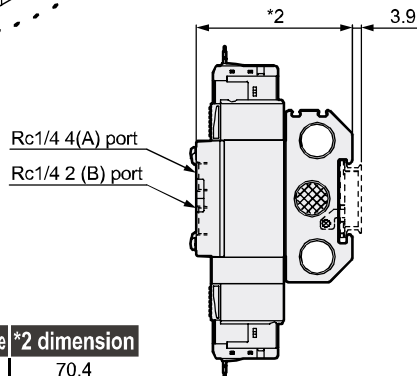


- Rc1/4 female thread (08)

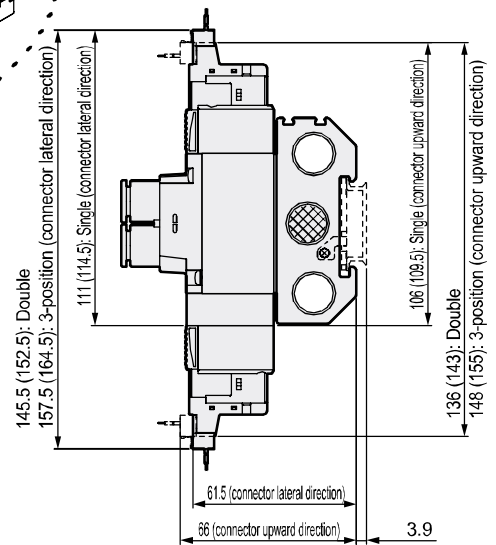
- E type connector (E)



Note: Values in ( ) are for AC voltage.



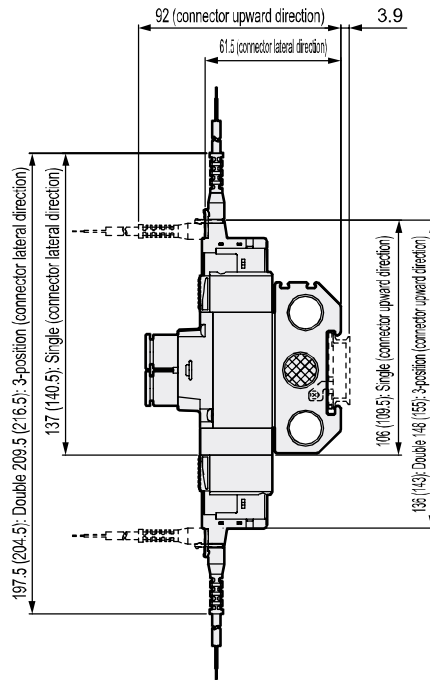
Female thread bore size	*2 dimension
Rc1/4	70.4
1/4NPT	70.9



Stn No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	62.0	81.0	100.0	119.0	138.0	157.0	176.0	195.0	214.0	233.0	252.0	271.0	290.0	309.0	328.0	347.0	366.0	385.0	404.0
L <sub>1</sub>	50.0	69.0	88.0	107.0	126.0	145.0	164.0	183.0	202.0	221.0	240.0	259.0	278.0	297.0	316.0	335.0	354.0	373.0	392.0
L <sub>2</sub>	112.5	125.0	150.0	162.5	187.5	200.0	225.0	237.5	262.5	275.0	300.0	312.5	337.5	350.0	375.0				
L <sub>3</sub>	100.0	112.5	137.5	150.0	175.0	187.5	212.5	225.0	250.0	262.5	287.5	300.0	325.0	337.5	362.5				

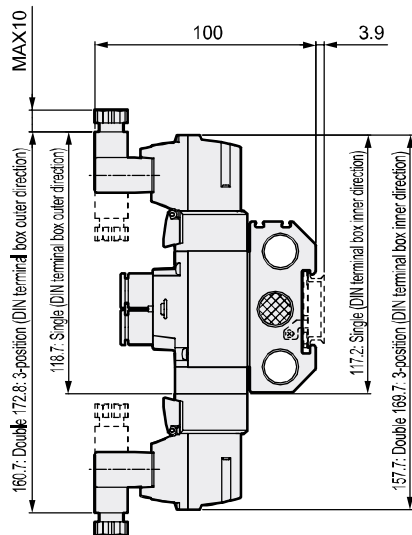
## Dimensions

- EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

- DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# M4GA3 Series

Individual wiring manifold; body piping

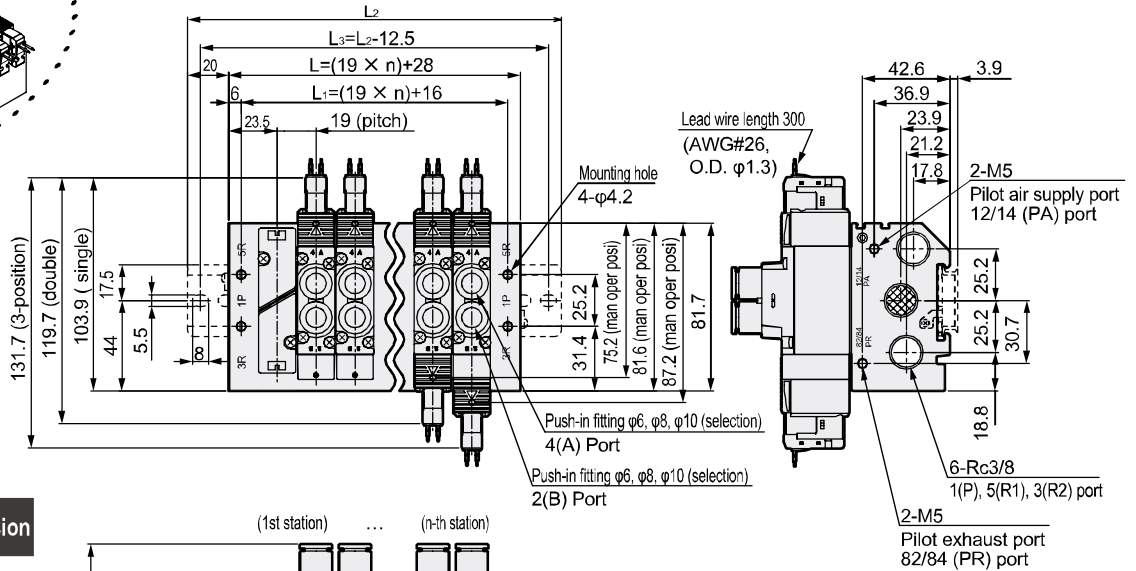
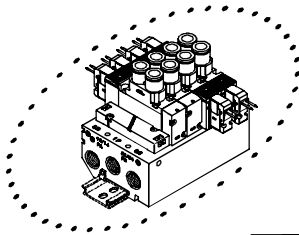
## Dimensions

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E  
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/  
LMF0
- MN3S0  
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G  
GMF
- PV5  
GMF
- PV5S-0
- 3QR  
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/  
NVP
- 4F\*0EX
- 4F\*0E
- HMV  
HSV
- 2QV  
3QV
- SKH
- PCD
- Silencer
- TotAirSys  
(TotalAir)
- TotAirSys  
(Gamma)
- Ending

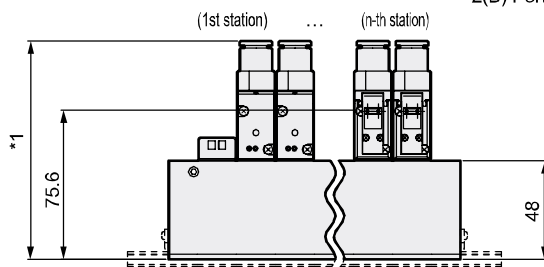
### M4GA3

- External pilot (K)  
Grommet lead wire (blank)

\* For the 2-position single 3-port valve, either A port or B port is a plug.

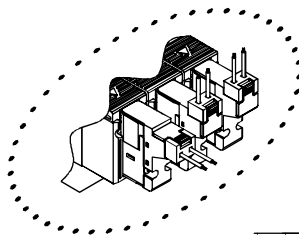
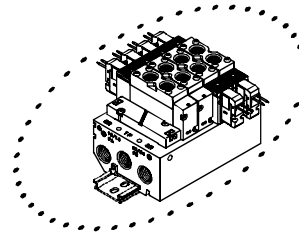


Push-in fitting bore size	*1 dimension
$\phi 6$	100.8
$\phi 8$	106.3
$\phi 10$	107
$\phi 5/16"$	110.2
$\phi 3/8"$	

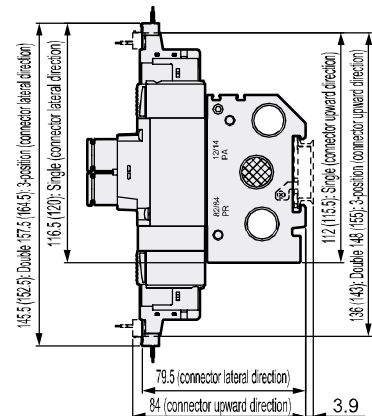
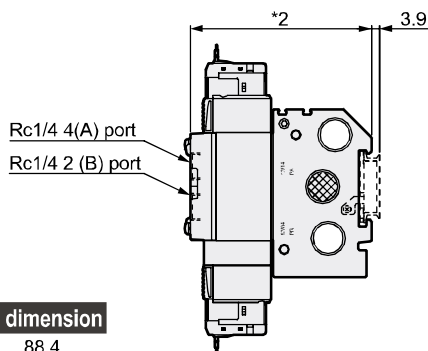


- External pilot (K)  
Rc1/4 female thread (08)

- External pilot (K)  
E type connector (E)



Note: Values in ( ) are for AC voltage.

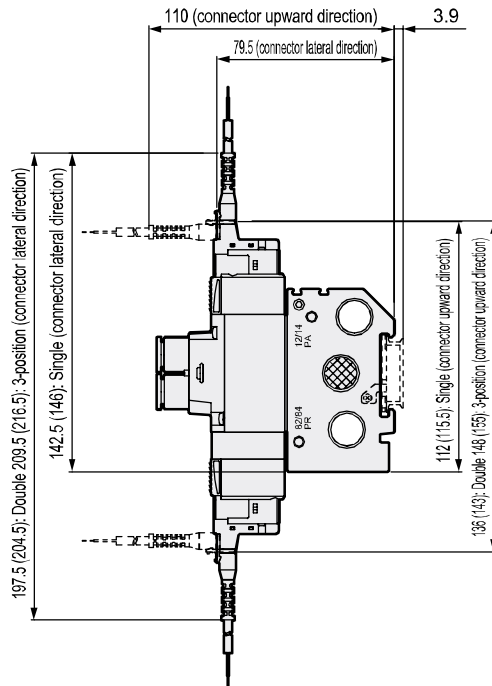


Female thread bore size	*2 dimension
Rc1/4	88.4
1/4NPT	88.9

Stn No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	66.0	85.0	104.0	123.0	142.0	161.0	180.0	199.0	218.0	237.0	256.0	275.0	294.0	313.0	332.0	351.0	370.0	389.0	408.0
L <sub>1</sub>	54.0	73.0	92.0	111.0	130.0	149.0	168.0	187.0	206.0	225.0	244.0	263.0	282.0	301.0	320.0	339.0	358.0	377.0	396.0
L <sub>2</sub>	112.5	125.0	150.0	175.0	187.5	212.5	225.0	250.0	262.5	287.5	300.0	325.0	337.5	362.5	375.0				
L <sub>3</sub>	100.0	112.5	137.5	162.5	175.0	200.0	212.5	237.5	250.0	275.0	287.5	312.5	325.0	350.0	362.5				

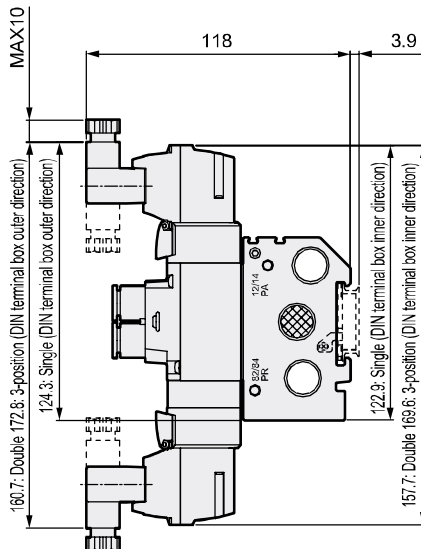
## Dimensions

- External pilot (K)  
EJ type connector (E\*\*J)



Note: Values in ( ) are for AC voltage.

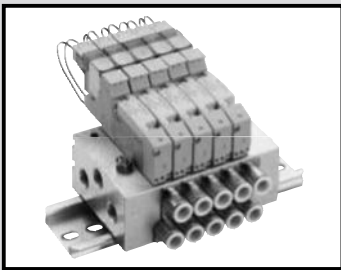
- External pilot (K)  
DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4GA/B  
M4GA/B  
MN4GA/B  
4GA/B (mastr)  
4GD/E  
M4GD/E  
MN4GD/E  
4GA4/B4  
MN3E  
MN4E  
W4GA/B2  
W4GB4  
4TB  
4L2-4/  
LMF0  
MN3S0  
MN4S0  
4SA/B0  
4KA/B  
4KA/B (mastr)  
4F  
4F (mastr)  
PV5G  
GMF  
PV5  
GMF  
PV5S-0  
3QR  
3QB  
MV3QR  
3MA/B0  
3PA/B  
P/M/B  
NP/NAP/  
NVP  
4F\*0EX  
4F\*0E  
HMV  
HSV  
2QV  
3QV  
SKH  
PCD  
Silencer  
TotAirSys  
(TotalAir)  
TotAirSys  
(Gamma)  
Ending



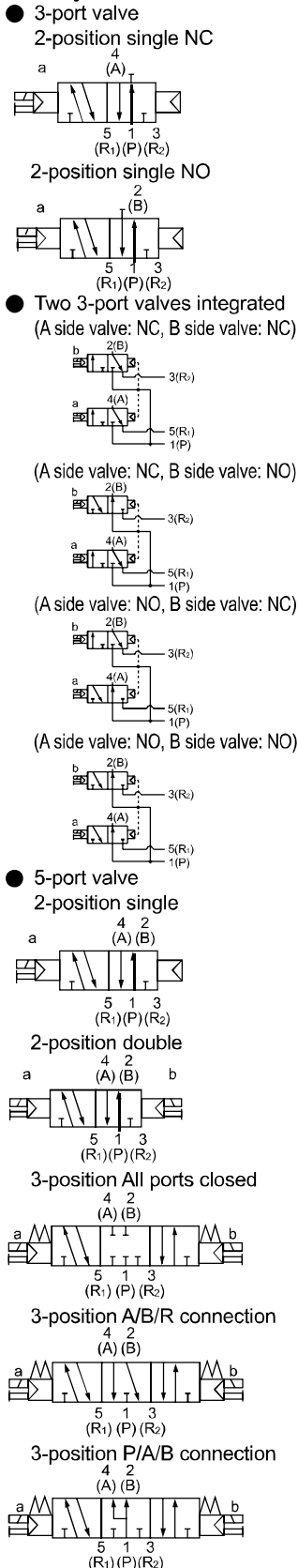
Individual wiring manifold  
Base piping  
Direct mount/DIN rail mount

# M3GB1/2 / M4GB1/2/3-(D) Series

● Cylinder bore size:  $\phi 20$  to  $\phi 100$



## JIS symbol



## Manifold common specifications

Descriptions	Content	
Manifold	Integrated base	
Mounting method	Direct mount/DIN rail mount	
Supply and exhaust method	Common supply/common exhaust (With internal exhaust check valve)	
Pilot exhaust method	Internal pilot	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)
	External pilot	Main valve/pilot valve individual exhaust
Piping direction	Lateral direction from base	
Valve and operation	Pilot operated soft spool valve	
Working fluid	Compressed air	
Max. working pressure	MPa 0.7 ( $\approx 100$ psi, 7 bar)	
Min. working pressure	MPa 0.2 ( $\approx 29$ psi, 2 bar) (*3)	
Proof pressure	MPa 1.05 ( $\approx 150$ psi, 10.5 bar)	
Ambient temperature	$^{\circ}\text{C}$ -5 (23 $^{\circ}\text{F}$ ) to 55 (131 $^{\circ}\text{F}$ ) (no freezing)	
Fluid temperature	$^{\circ}\text{C}$ 5 (41 $^{\circ}\text{F}$ ) to 55 (131 $^{\circ}\text{F}$ )	
Manual override	Non-locking/locking common type (standard)	
Lubrication (*1)	Not required	
Degree of protection (*2)	Dust-proof	
Vibration resistance	$\text{m/s}^2$ 50 or less	
Shock resistance	$\text{m/s}^2$ 300 or less	
Atmosphere	Cannot be used in corrosive gas environments	

- \*1: Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.  
\*2: Avoid dripping water or oil, etc., during use. IP65 (jet-proof) applies for DIN terminal box specifications. However, the specified outer diameter of the applicable cord and tightening torque must be used for fixing in place.  
\*3: The working pressure range is 0 to 0.7 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

## Electrical specifications

Descriptions	Content	Content					
		DC24	DC12	DC5	DC3	AC100	AC200
Rated voltage	V						
Voltage fluctuation range		$\pm 10\%$					
Holding current	Standard	0.015	0.030	0.072	0.120	0.009	0.006
	A (*4)	(0.017)	(0.034)	(0.082)	(0.136)	(0.009)	(0.006)
Power consumption	Standard	0.35 (0.40)		0.35 (0.40)		-	
	W (*4)	Low exoergic/energy circuit		-		-	
Apparent power	Standard	-		-		0.93	
	VA (*4) (*5)	-		-		(0.98)	
Thermal class		B					
Surge suppressor		Option					
Indicator		Lamp (option)					

\*4: Values in ( ) apply when lamp is included. In addition, the type with low exoergic/energy-saving circuit is only available with lamp.  
\*5: 200 VAC is the value of DIN terminal box (with lamp).

## Individual specifications

Descriptions	M3GB1/M4GB1		M3GB2/M4GB2		M4GB3		
	Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN rail mount	
Max. station No.	Standard (Internal pilot)		20 stations	16 stations	20 stations	16 stations	
	External pilot		12 stations	12 stations	20 stations	16 stations	
Port size	Rc thread, M5	A/B Port	Barbed fitting $\phi 1.8$ Push-in fitting $\phi 1.8, \phi 4, \phi 6, \phi 8$ (*6) M5	Push-in fitting $\phi 4, \phi 6, \phi 8, \phi 10$ (*6) Rc1/8	Push-in fitting $\phi 6, \phi 8, \phi 10$ Rc1/4		
		P/R1/R2 port	Rc1/8	Rc1/4	Rc3/8		
	NPT thread, M5	A/B Port	Push-in fitting $\phi 1/8", \phi 5/32"$ M5	Push-in fitting $\phi 1/4", \phi 5/16"$ 1/8NPT	Push-in fitting $\phi 5/16", \phi 3/8"$ 1/4NPT (*6)		
		P/R1/R2 port	1/8NPT	1/4NPT	3/8NPT (*6)		
G thread, M5	A/B Port	Push-in fitting $\phi 4, \phi 6, \phi 8, \phi 10$ M5	Push-in fitting $\phi 4, \phi 6, \phi 8, \phi 10$ G1/8	-			
	P/R1/R2 port	G1/8	G1/4	-			
Manifold base weight calculation formula (n: station No.) g	Standard	35n+61	36n+115	71n+106	73n+134	113n+170	115n+119
	External pilot	35n+106	36n+114	76n+135	78n+166	118n+194	120n+223

Refer to "Cautions for Mounting the DIN Rail" (page 754), and select the manifold.  
For 10 or over manifold station No. (5 stations for 4G3), use ports on both side for air supply and exhaust.  
The manifold base weight is the value for screw specifications.  
\*6: Available as custom order.



## Flow characteristics

Model No.	Solenoid position	P→A/B		A/B→R1/R2		
		C[dm <sup>3</sup> /(s·bar)]	b	C[dm <sup>3</sup> /(s·bar)]	b	
M3GB1 M4GB1	Two 3-port valves integrated	0.86	0.35	1.1(0.67)	0.22(0.23)	
	2-position	1.1	0.22	1.2(0.70)	0.20(0.10)	
	3-position	All ports closed	0.98	0.22	1.1 -	0.24 -
		ABR connection	0.97	0.35	1.3(0.68)	0.22(0.24)
	PAB connection	1.1	0.38	1.1 -	0.21 -	
M3GB2 M4GB2	Two 3-port valves integrated	1.7	0.44	2.1(1.6)	0.32(0.30)	
	2-position	2.4	0.34	2.7(1.7)	0.24(0.31)	
	3-position	All ports closed	2.2	0.34	2.4 -	0.29 -
		ABR connection	2.2	0.34	2.8(1.8)	0.24(0.27)
PAB connection		2.4	0.29	2.4 -	0.29 -	
M4GB3	2-position	3.5	0.34	3.8(2.6)	0.11(0.27)	
	3-position	All ports closed	3.1	0.33	3.3 -	0.22 -
		ABR connection	3.0	0.30	3.8(2.7)	0.11(0.22)
		PAB connection	3.6	0.36	3.3 -	0.28 -

\*1: Effective cross-sectional area S and sonic conductance C are converted as  $S \approx 5.0 \times C$ .

\*2: Values in ( ) are with the exhaust check valve.

Ozone-proof specifications / coolant proof specifications

Can be selected with "How to order" Item (E) option "A" on page 115.

Clean-room specifications

- Anti-dust generation structure for use in cleanrooms

\*\* - Voltage - **P7\***

Specifications for rechargeable battery (Catalog No. CC-1226A)

- For use in the rechargeable battery manufacturing process, materials used for air path and sliding section are limited

\*\* - Voltage - **P4**

CE marking specifications

\*\* - Voltage - **ST**

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

# M4GB1/2/3 Series

Individual wiring manifold; base piping

## How to order

Manifold model No.

**M** **4GB1** **1** **0R** - **C6** - **E2** **H** **D** - **3**

3-port manifold model No.

**M** **3GB1** **66** **0R** - **C6** - **E2** **H** **D** - **3**

● Single valve for mounting base

**4GB1** **1** **9R** - **00** - **E2** **H** - **3**

● 3-port discrete valve for mounting base

**3GB1** **66** **9R** - **00** - **E2** **H** - **3**

**B** Solenoid position

**A** Model No.

**C** Port size

\*3  
\*4

**D** Electrical connections

**E** Option

**F** Mount

**G** Station No.

**H** Voltage

## ⚠ Precautions for model No. selection

- \*1: Select M4GB\*80R when mixing with 3, 5-port valves. Further, select M3GB\*80R when mixing with masking plate.
- \*2: Not compatible with combination with external pilot (K). Dimensions are the same as those of the respective 2-position double solenoid.
- \*3: CL\* radial push-in fitting is compatible only with the single solenoid manifold. Long elbow is for A port and short elbow for B port.
- \*4: A and B ports are the same size for radial push-in fitting (upward) (downward).
- \*5: 4G1 C8 and 4G2 C10 do not support push-in fitting mixing.
- \*6: Custom order.

\* Be sure to fill in the "Manifold specifications sheet" (pages 206 to 220).

		A Model No.				
		3GB1	3GB2	4GB1	4GB2	4GB3
<b>B Solenoid position</b>						
1	2-position single			●	●	●
2	2-position double			●	●	●
3	3-position all ports closed			●	●	●
4	3-position ABR connection			●	●	●
5	3-position PAB connection			●	●	●
66	Two 3-port valves integrated	A valve side: Normally closed	●	●		
67		B valve side: Normally closed	●	●		
76	*1/*2	A valve side: Normally open	●	●		
77		B valve side: Normally open	●	●		
8	Mix manifold (when there are multiple solenoid positions)	●	●	●	●	●
<b>C Port size</b>						
Port	4(A)/2(B) port	P/R1/R2 port (2) = Rc1/8 (3) = Rc1/4 (4) = Rc3/8				
CF	φ1.8 barbed fitting (compatible tube UP-9102-**) (2)		(2)			
C18	φ1.8 push-in fitting (compatible tube UP-9402-**) (2)		(2)			
C4	φ4 push-in fitting (2) (3) (2) (3)					
C6	φ6 push-in fitting (2) (3) (2) (3) (4)					
C8	φ8 push-in fitting *5, *6 (2) (3) (2) (3) (4)					
C10	φ10 push-in fitting *5, *6 (3) (3) (4)					
CL18	φ1.8 radial push-in fitting upward (compatible tube UP-9402-**) (2)		(2)			
CL4	Radial φ4 push-in fitting (upward) (2)		(2)			
CL6	Radial φ6 push-in fitting (upward) (2) (3)		(2) (3)			
CL8	Radial φ8 push-in fitting (upward) (2) (3) (4)		(2) (3) (4)			
CL10	Radial φ10 push-in fitting (upward) (4)				(4)	
CD18	φ1.8 radial push-in fitting downward (compatible tube UP-9402-**) (2)		(2)			
CD4	Radial φ4 push-in fitting (downward) (2) (2)		(2)			
CD6	Radial φ6 push-in fitting (downward) (2) (3) (2) (3)		(2) (3)			
CD8	Radial φ8 push-in fitting (downward) (3) (3) (4)		(3) (3) (4)			
CD10	Radial φ10 push-in fitting (downward) (4)				(4)	
CX	Push-in fitting mix (2) (3) (2) (3) (4)		(2) (3) (2) (3) (4)			
M5	M5 (2) (2)		(2) (2)			
06	Rc1/8 (3) (3)		(3) (3)			
08	Rc1/4 (4)				(4)	
Port	4(A)/2(B) port	P/R1/R2 port (5) = 1/8NPT, (6) = 1/4NPT, (7) = 3/8NPT				
C3N	φ1/8" push-in fitting (5) (5)		(5) (5)			
C4N	φ5/32" push-in fitting (5) (5)		(5) (5)			
C6N	φ1/4" push-in fitting (6) (6)		(6) (6)			
C8N	φ5/16" push-in fitting (6) (6) (7)		(6) (6) (7)			
C10N	φ3/8" push-in fitting (7)				(7)	
CL3N	φ1/8" radial push-in fitting (upward) *6 (5)		(5)			
CL4N	φ5/32" radial push-in fitting (upward) *6 (5)		(5)			
CL6N	φ1/4" radial push-in fitting (upward) *6 (6)		(6)			
CL8N	φ5/16" radial push-in fitting (upward) *6 (6)		(6)			
CXN	Push-in fitting mix (5) (6) (5) (6) (7)		(5) (6) (5) (6) (7)			
M5N	M5 (5) (5)		(5) (5)			
06N	1/8NPT (6) (6)		(6) (6)			
08N	1/4NPT *6 (7)				(7)	
Port	4(A)/2(B) port	P/R1/R2 port (8) = G1/8, (9) = G1/4				
C4G	φ4 push-in fitting (8) (9) (8) (9)		(8) (9) (8) (9)			
C6G	φ6 push-in fitting (8) (9) (8) (9)		(8) (9) (8) (9)			
C8G	φ8 push-in fitting (9) (9)		(9) (9)			
CL4G	Radial φ4 push-in fitting (upward) *6 (8)		(8)			
CL6G	Radial φ6 push-in fitting (upward) *6 (8) (9)		(8) (9)			
CL8G	Radial φ8 push-in fitting (upward) *6 (9)		(9)			
CXG	Push-in fitting mix (8) (9) (8) (9)		(8) (9) (8) (9)			
M5G	M5 (8) (8)		(8) (8)			
06G	G1/8 (9) (9)		(9) (9)			
00	Discrete valve for mounting base	●	●	●	●	●