

Single valve Body piping 4GA4 Series

● Cylinder bore size: $\phi 100$ to $\phi 140$



Common specifications

Descriptions	Content
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈ 100 psi, 7 bar)
Min. working pressure MPa	0.2 (≈ 29 psi, 2 bar)
Proof pressure MPa	1.05 (≈ 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
Lubrication *1	Not required
Degree of protection *2	Dust-proof (IP40 equivalent (DIN terminal box: IP65))
Vibration resistance m/s^2	50 or less
Shock resistance 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 water drops or oil, etc., during use.

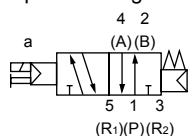
IP65 (jet-proof) or equivalent applies for DIN terminal box specifications.

However, the specified outer diameter of the applicable cord and tightening torque must be used for fixing in place.

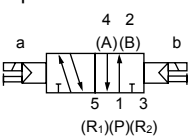
JIS symbol

● 5-port valve

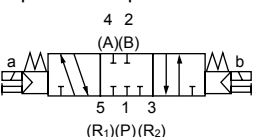
2-position single



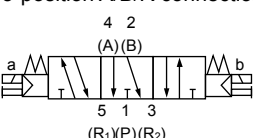
2-position double



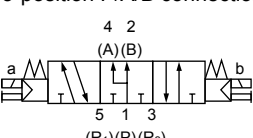
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Electrical specifications

Descriptions	Content		
Rated voltage V	AC	100(50/60 Hz) 110(50/60 Hz)	
	DC	12, 24	
Voltage fluctuation range	$\pm 10\%$		
Starting current A	AC	100 V	0.056/0.044
		110 V	0.051/0.040
	DC	12 V	-
		24 V	-
Holding current A	AC	100 V	0.028/0.022
		110 V	0.025/0.020
	DC	12 V	0.079(0.083)
		24 V	0.040(0.042)
Power consumption W	AC	100 V	1.8/1.4
		110 V	(1.8/1.5)
	DC	12 V	0.95(1.0)
		24 V	
Thermal class	B		
Surge suppressor	Option		
Indicator	Lamp (option)		

*3: Values in () apply when lamp is included.

Individual specifications

Descriptions	4GA4	
Port size	A/B Port	Push-in fitting $\phi 8$, $\phi 10$, $\phi 12$ Rc3/8, G3/8, NPT3/8
	P/R1/R2 port	Rc1/4, G1/4, NPT1/4

Descriptions	4GA4		
	ON	OFF	
Response time ms	2-position Single	40(40)	40(52)
	Double	40(52)	40(52)
3-position ABR connection	60(72)	60(72)	

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

Descriptions	4GA4		
Weight g	2-position Single	Grommet lead wire	310(319)
		E type connector	313(322)
		DIN terminal box	322(331)
	2-position Double	Grommet lead wire	371(380)
		E type connector	377(386)
		DIN terminal box	395(404)
	3-position All ports closed	Grommet lead wire	402(411)
		E type connector	408(417)
		DIN terminal box	426(435)

Values in () include the mounting screw and gasket. 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.

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

Flow characteristics

Model No.	Solenoid position		P→A/B		A/B→R1/R2	
			C[dm ³ /(s·bar)]	b	C[dm ³ /(s·bar)]	b
4GA4	2-position		8.1	0.40	8.0	0.31
	3-position	All ports closed	6.9	0.37	7.5	0.42
		ABR connection	6.8	0.40	8.7	0.37
		PAB connection	8.9	0.37	7.6	0.27

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

Coolant proof specifications

Can be selected with “How to order” Item E option “A” on page 608.

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

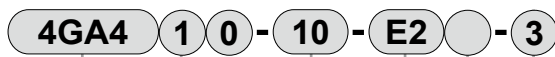
** - Voltage - **P4**

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

4GA4 Series

Single valve; body piping

How to order



A Model No.

4GA4

A Model No.

B Solenoid position

C Port size

D Electrical connections
Refer to page 605 for the circuit diagram with surge suppressor/lamp.

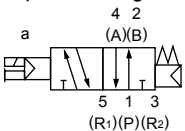
E Option

F Voltage

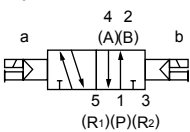
JIS symbol

● 5-port valve

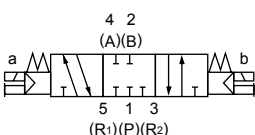
2-position single



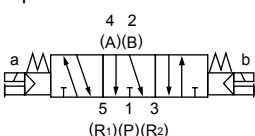
2-position double



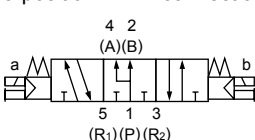
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection

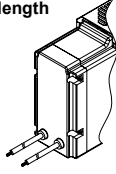
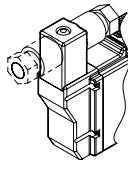
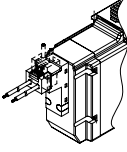
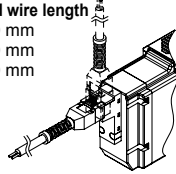
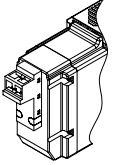
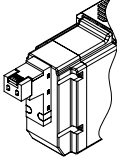


Code	Content	
B Solenoid position		
1	2-position single	●
2	2-position double	●
3	3-position all ports closed	●
4	3-position ABR connection	●
5	3-position PAB connection	●
C Port size		
Port	A/B Port	P/R Port Rc1/4
C8	φ8 push-in fitting	●
C10	φ10 push-in fitting	●
C12	φ12 push-in fitting	●
10	Rc3/8	●
10G	G3/8	● *1
10N	NPT3/8	● *2
D Electrical connections		
Blank	Grommet lead wire	●
B	DIN terminal box (Pg7) with surge suppressor/lamp	●
E type connector (upward/lateral common)		
E0	Lead wire (300 mm)	●
E00	Lead wire (500 mm)	●
E01	Lead wire (1000 mm)	●
E02	Lead wire (2000 mm)	●
E03	Lead wire (3000 mm)	●
E2	Lead wire (300 mm) with surge suppressor/lamp	●
E20	Lead wire (500 mm) with surge suppressor/lamp	●
E21	Lead wire (1000 mm) with surge suppressor/lamp	●
E22	Lead wire (2000 mm) with surge suppressor/lamp	●
E23	Lead wire (3000 mm) with surge suppressor/lamp	●
E0N	Without lead wire (without socket)	●
E2N	Without lead wire (without socket) with surge suppressor/lamp	●
E3	No lead wire (with socket/terminal), surge suppressor/indicator lamp	●
E1	Without lead wire (socket/terminal attached)	●
EJ type connector (socket with cover, upward/lateral common)		
E01J	Lead wire (1000 mm)	●
E02J	Lead wire (2000 mm)	●
E03J	Lead wire (3000 mm)	●
E21J	Lead wire (1000 mm) with surge suppressor/lamp	●
E22J	Lead wire (2000 mm) with surge suppressor/lamp	●
E23J	Lead wire (3000 mm) with surge suppressor/lamp	●
E Option		
Blank	None	●
A	Coolant proof	●
F	A/B port filter built in	●
F Voltage		
1	100 VAC	●
3	24 VDC	●
4	12 VDC	●
5	110 VAC	●

⚠ Precautions for model No. selection

*1: P/R port is G1/4.

*2: P/R port is NPT1/4.

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

4GA4 Series

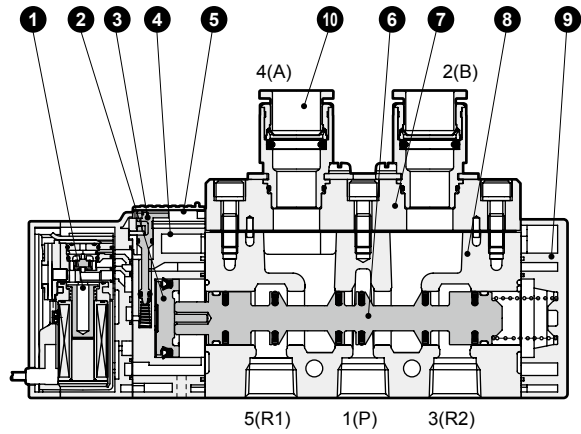
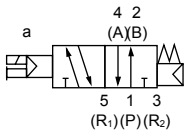
Single valve; body piping

Internal structure and parts list

- 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

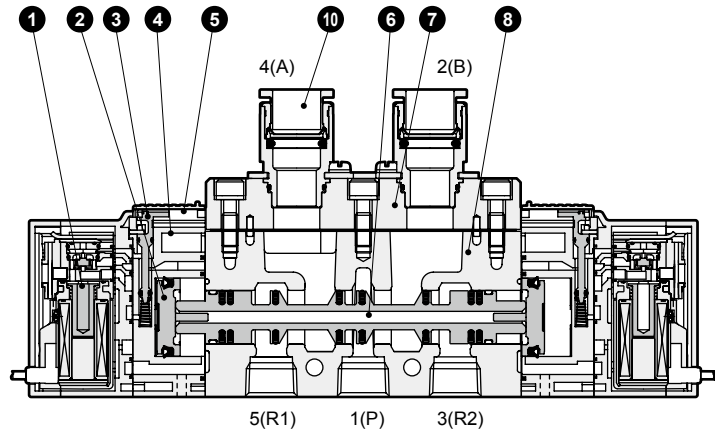
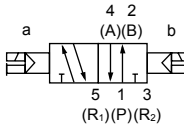
4GA410

● 2-position single
Grommet lead wire (blank)



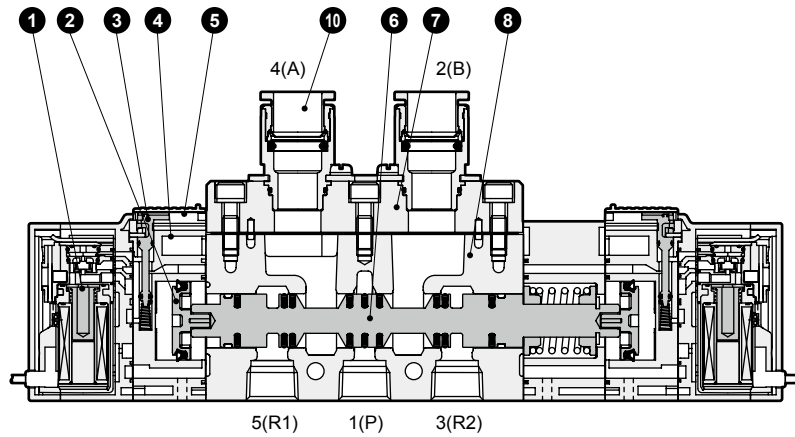
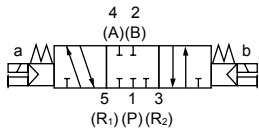
4GA420

● 2-position double
Grommet lead wire (blank)



4GA4³/₄/₅0

● 3-position
Grommet lead wire (blank)



Main parts list

No.	Part name	Material
1	Coil assembly	-
2	Piston assembly	-
3	Manual override	-
4	Piston chamber	PBT
5	Manual protection cover	PBT
6	Spool assembly	-
7	Fitting adaptor	Aluminum
8	Body	Aluminum
9	Cap	PA
10	Cartridge push-in fitting	-

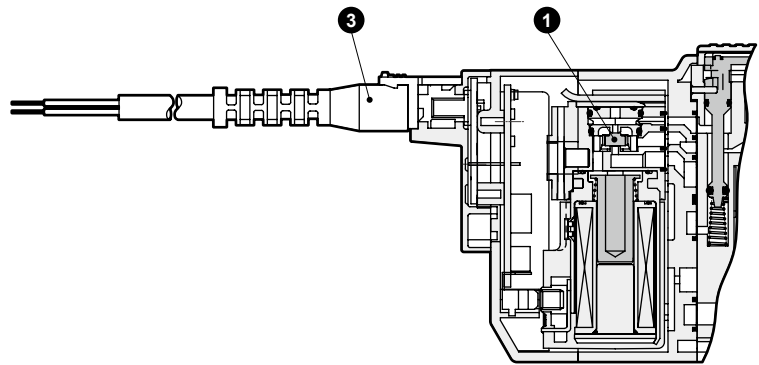
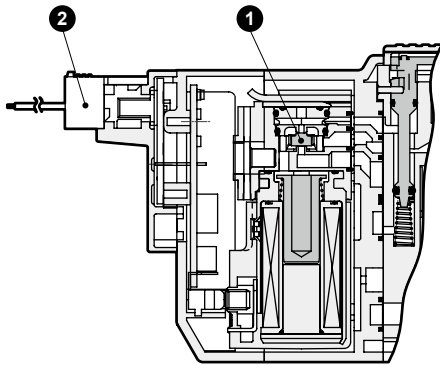
Parts list

No.	Part name	Model No.
-	Cartridge push-in fitting and related parts	φ8 straight
-		φ10 straight
-		φ12 straight

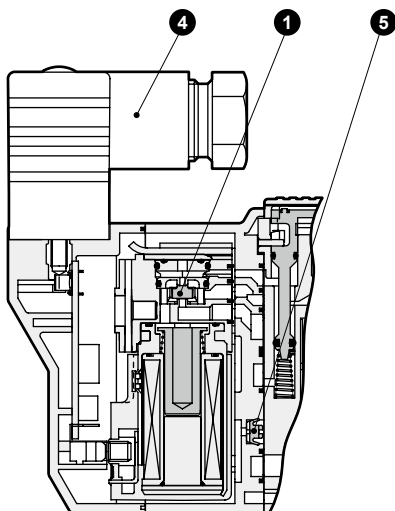
Internal structure and parts list/dimensions (electrical connections section)

● E type connector E□□

● EJ type connector E□□J



● DIN terminal box B



Main parts list

No.	Part name	Material	No.	Part name	Material
1	Coil assembly	-	4	DIN terminal box assembly	-
2	E type connector socket assembly	-	5	Check valve	NBR
3	Socket assembly with cover	-			

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

4GA4 Series

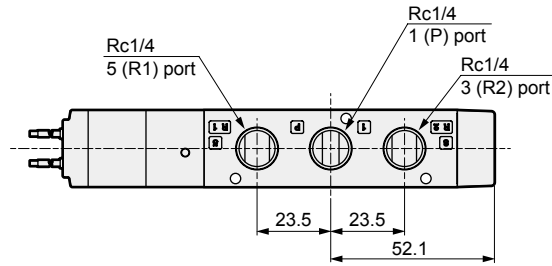
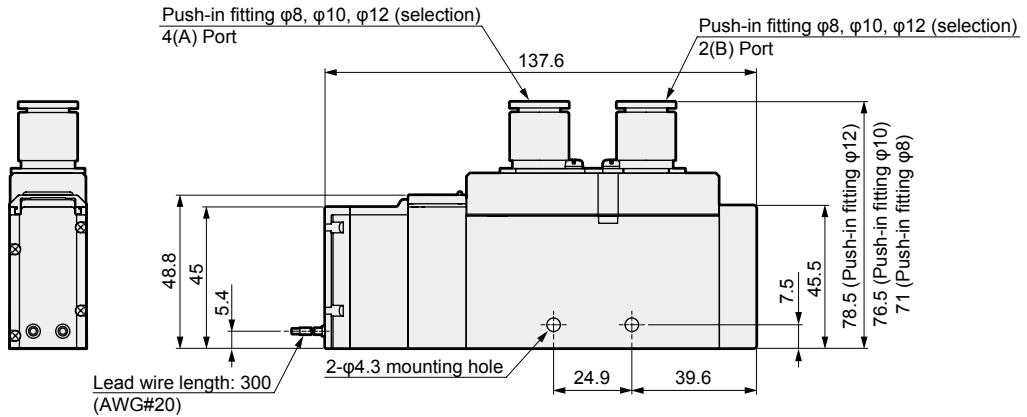
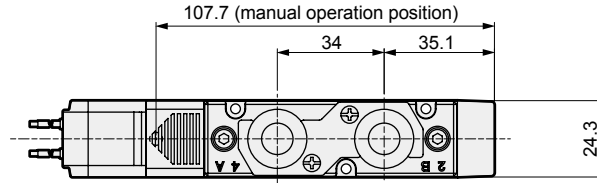
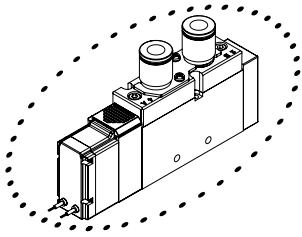
Single valve; body piping

Dimensions

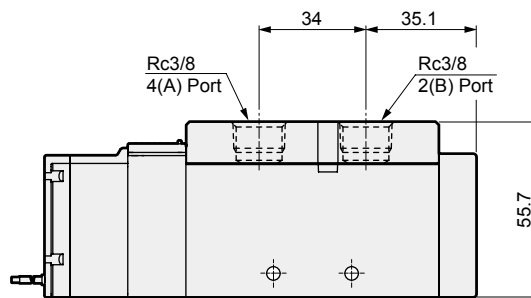
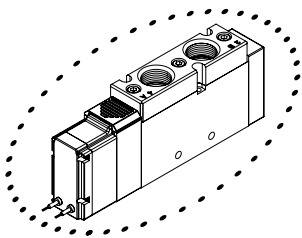
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F*0EX
-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

4GA410

● 2-position single grommet lead wire (blank)

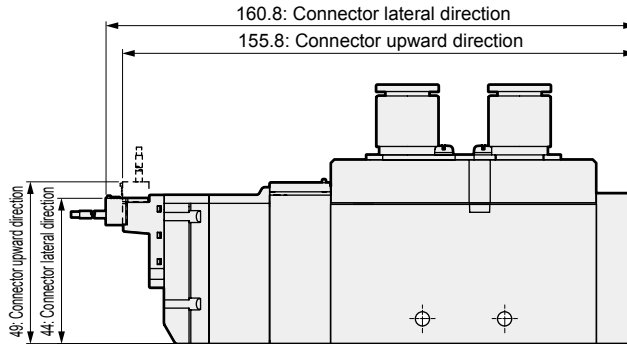
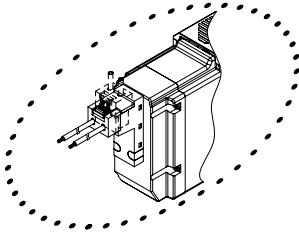


● Rc3/8 female thread (10)

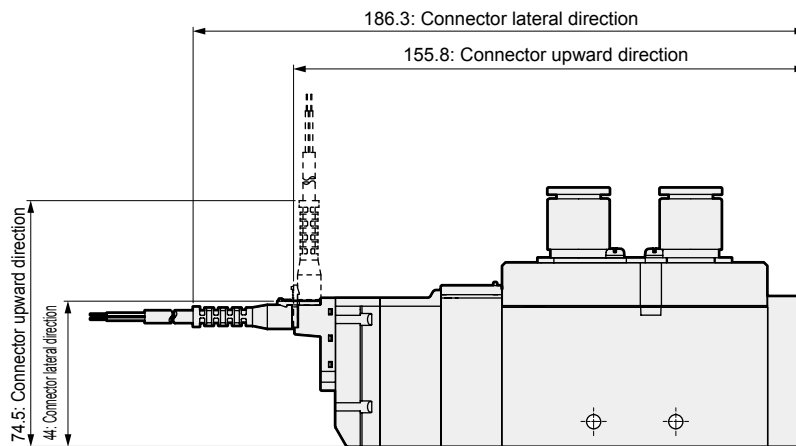
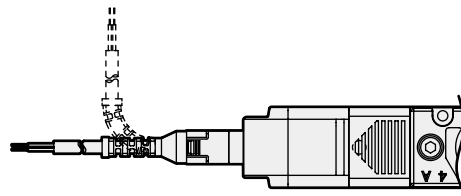
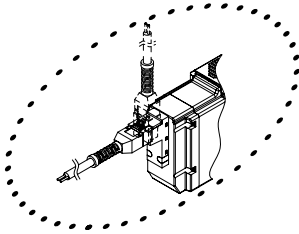


Dimensions

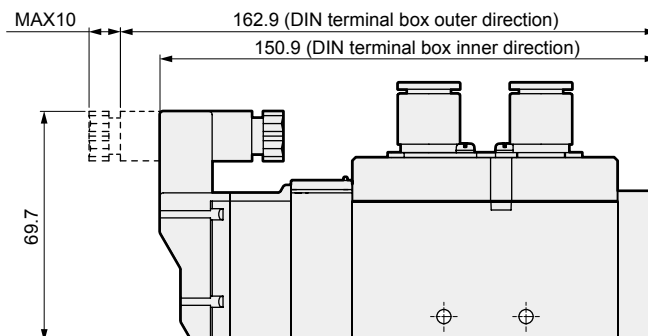
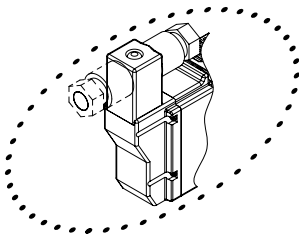
● E type connector (E)



● EJ type connector (E**J)



● 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

4GA4 Series

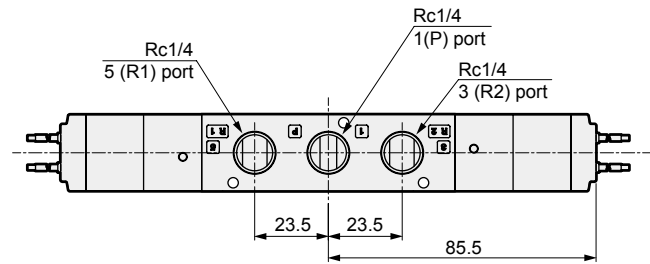
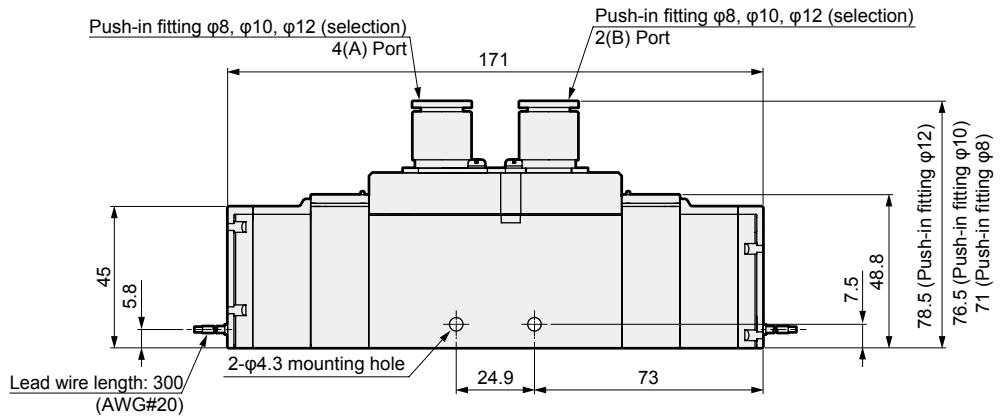
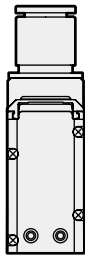
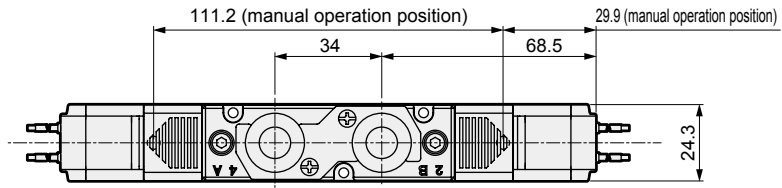
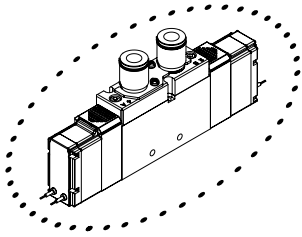
Single valve; body piping

Dimensions

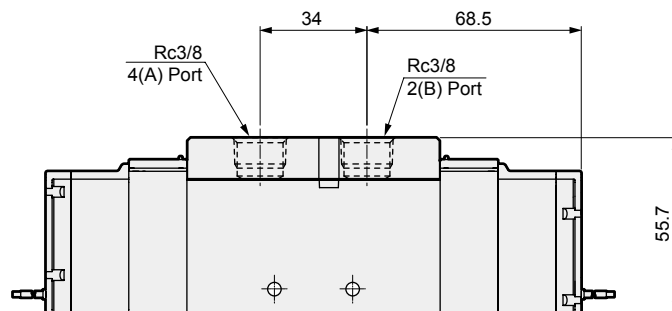
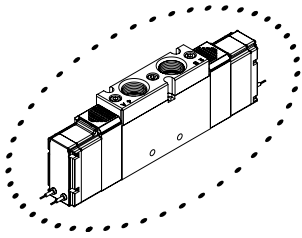
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G GMF
- PV5 GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F*0EX
- 4F*0E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

4GA420

● 2-position double grommet lead wire (blank)

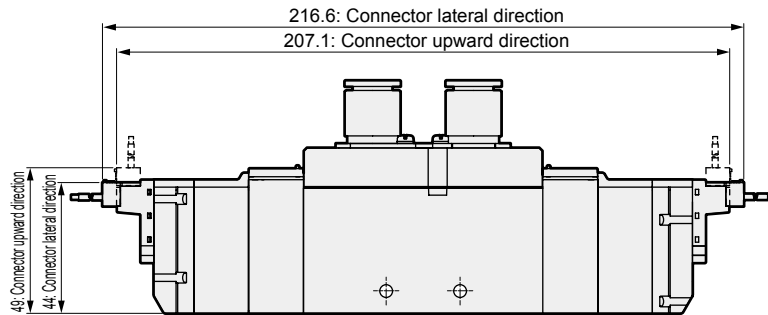
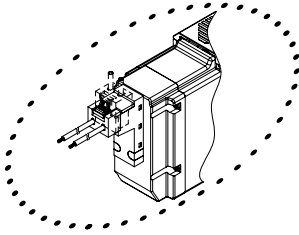


● Rc3/8 female thread (10)

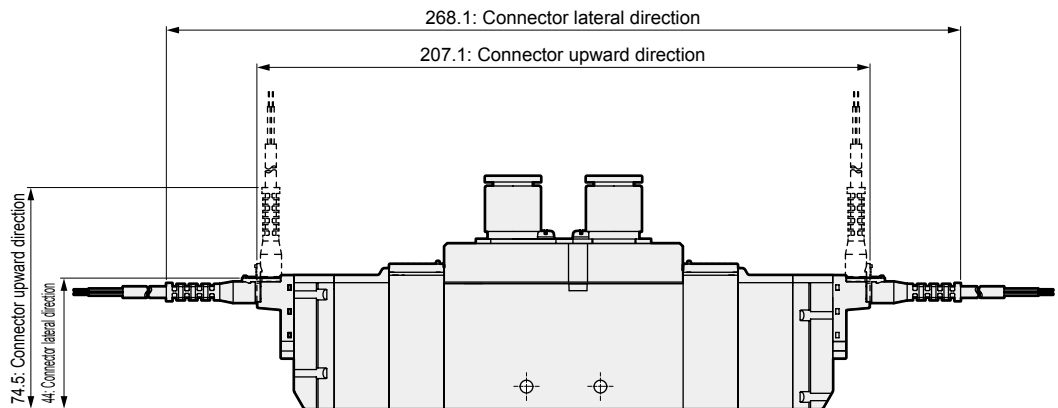
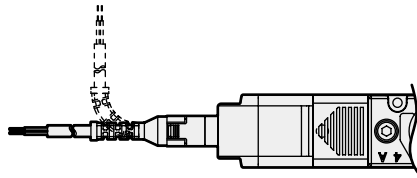
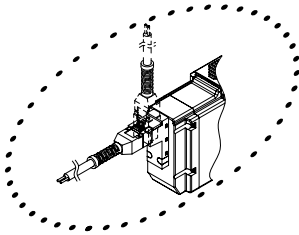


Dimensions

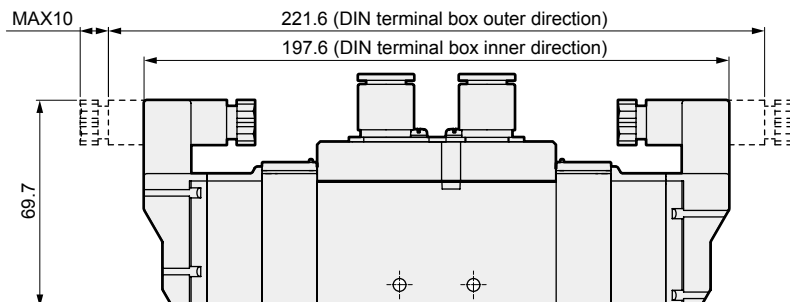
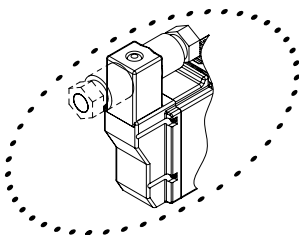
● E type connector (E)



● EJ type connector (E**J)



● 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

4GA4 Series

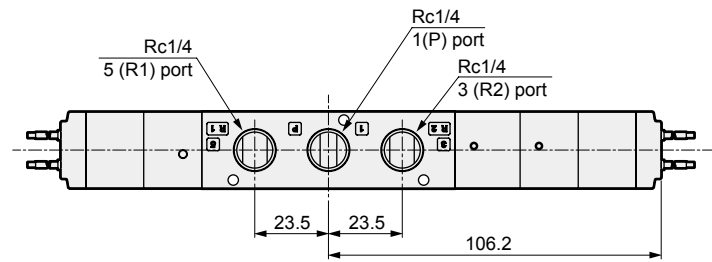
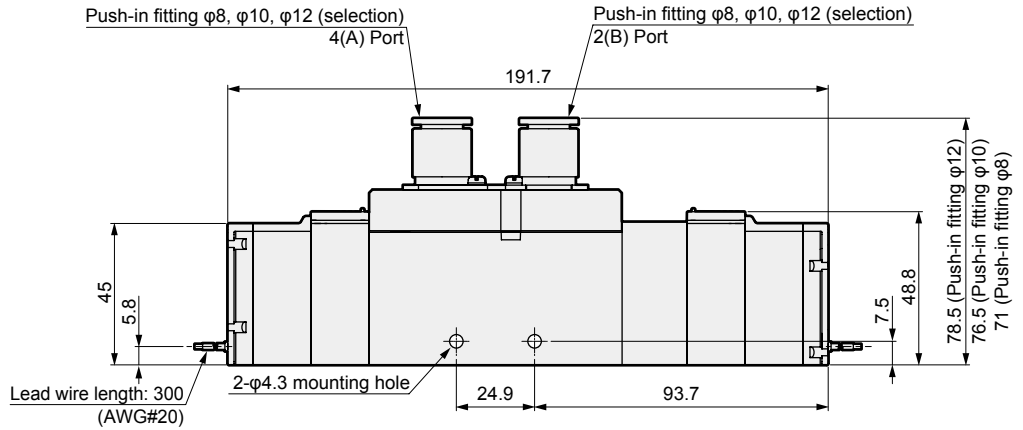
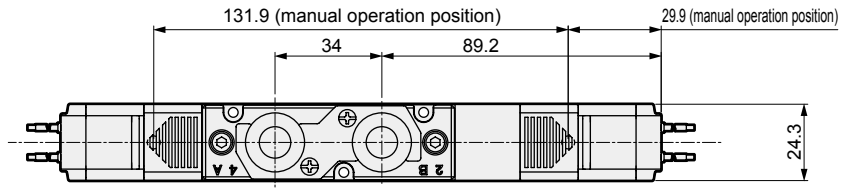
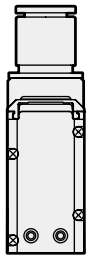
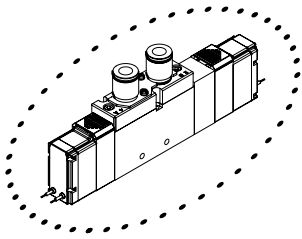
Single valve; body piping

Dimensions

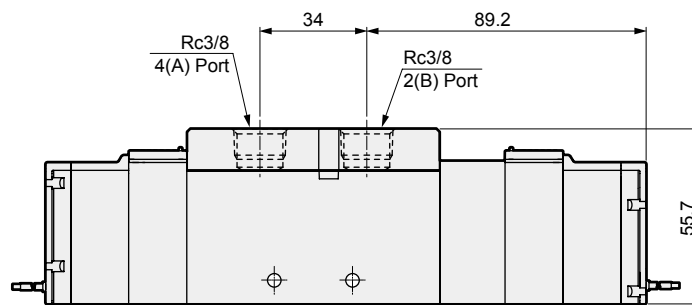
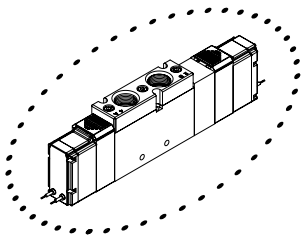
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F*0EX
-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

4GA4 ³/₄ 0

● 3-position grommet lead wire (blank)

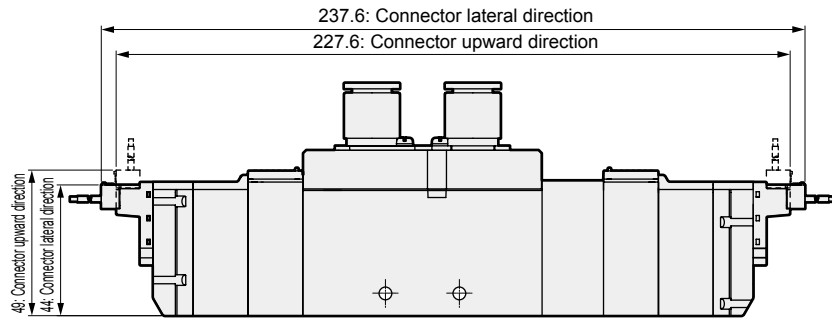
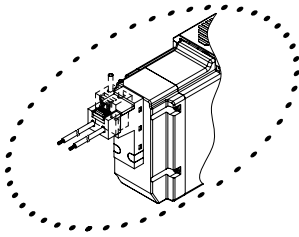


● Rc3/8 female thread (10)

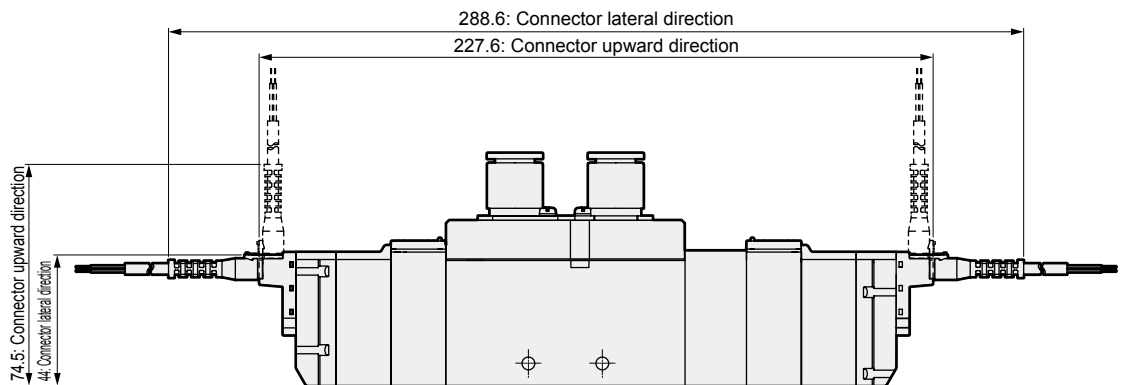
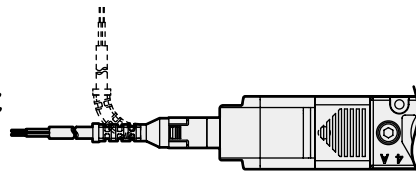
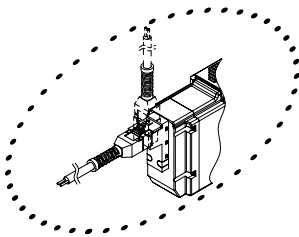


Dimensions

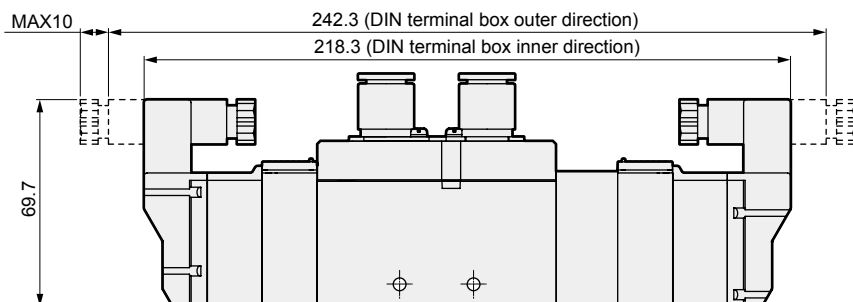
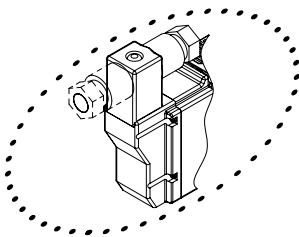
● E type connector (E)



● EJ type connector (E**J)

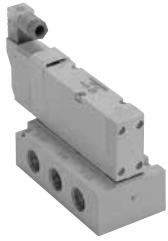


● DIN terminal box (B)



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



Single valve
Base piping

4GB4 Series

● Cylinder bore size: $\phi 125$ to $\phi 160$



- 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

Common specifications

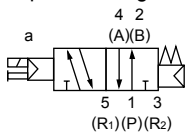
Descriptions	Content
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈ 100 psi, 7 bar)
Min. working pressure MPa	0.2 (≈ 29 psi, 2 bar) *3
Proof pressure MPa	1.05 (≈ 150 psi, 10.5 bar)
Ambient temperature $^{\circ}\text{C}$	-5 (23 $^{\circ}\text{F}$) 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
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 (IP40 equivalent (DIN terminal box: IP65))
Vibration resistance m/s^2	50 or less
Shock resistance 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 water drops or oil, etc., during use.
IP65 (jet-proof) or equivalent 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.

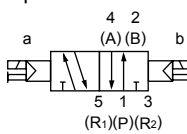
JIS symbol

● 5-port valve

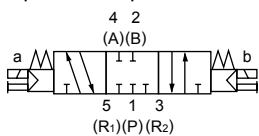
2-position single



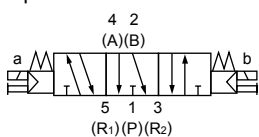
2-position double



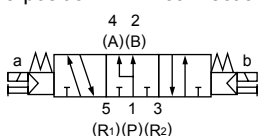
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Individual specifications

Descriptions		4GB4
Port size	A/B port	Rc3/8, Rc1/2, G3/8, G1/2, NPT3/8, NPT1/2
	P/R1/R2 port	Rc3/8, Rc1/2, G3/8, G1/2, NPT3/8, NPT1/2

Descriptions			4GB4	
			ON	OFF
Response time ms	2-position	Single	40(40)	40(52)
		Double	40(52)	40(52)
	3-position	ABR connection	60(72)	60(72)

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

Descriptions		4GB4		
Weight g	2-position	Single	Grommet lead wire	563(256)
			E type connector	566(259)
			DIN terminal box	575(268)
		Double	Grommet lead wire	620(313)
			E type connector	626(319)
			DIN terminal box	644(337)
	3-position	All ports Block	Grommet lead wire	655(348)
			E type connector	661(354)
			DIN terminal box	679(372)

Values in () 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.

Electrical specifications

Descriptions		Content	
Rated voltage V	AC	100(50/60 Hz) 110(50/60 Hz)	
	DC	12, 24	
Voltage fluctuation range		$\pm 10\%$	
Starting current A	AC	100 V	0.056/0.044
		110 V	0.051/0.040
	DC	12 V	-
		24 V	-
Holding current A	AC	100 V	0.028/0.022
		110 V	0.025/0.020
	DC	12 V	0.079(0.083)
		24 V	0.040(0.042)
Power consumption W	AC	100 V	1.8/1.4
		110 V	(1.8/1.5)
	DC	12 V	0.95(1.0)
		24 V	
Thermal class		B	
Surge suppressor		Option	
Indicator		Lamp (option)	

*4: Values in () apply when lamp is included.

Flow characteristics

Model No.	Solenoid position		P→A/B		A/B→R1/R2	
			C[dm ³ /(s·bar)]	b	C[dm ³ /(s·bar)]	b
4GB4	2-position		11	0.19	13	0.19
	3-position	All ports closed	9.1	0.11	12	0.27
		ABR connection	9.2	0.11	15	0.22
		PAB connection	10	0.06	12	0.24

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

Coolant proof specifications

Can be selected with “How to order” Item  option “A” on page 620.

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 - 

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

4GB4 Series

Single valve; base piping

How to order

4GB4 **1** **0** - **10** - **E2** **3**

A Model No.

B Solenoid position

C Port size

D Electrical connections
Refer to page 605 for the circuit diagram with surge suppressor/lamp.

E Option

F Voltage

A Model No.

4GB4

Code	Content	
B Solenoid position		
1	2-position single	●
2	2-position double	●
3	3-position all ports closed	●
4	3-position ABR connection	●
5	3-position PAB connection	●

C Port size			
Port	A/B Port	P/R Port	
		Rc3/8	Rc1/2
10	Rc3/8	●	
15	Rc1/2		●
10G	G3/8	●*1	
15G	G1/2		●*1
10N	NPT3/8	●*2	
15N	NPT1/2		●*2

D Electrical connections		
Blank	Grommet lead wire	●
B	DIN terminal box (Pg7) with surge suppressor/lamp	●

E type connector (upward/lateral common)		
E0	Lead wire (300 mm)	●
E00	Lead wire (500 mm)	●
E01	Lead wire (1000 mm)	●
E02	Lead wire (2000 mm)	●
E03	Lead wire (3000 mm)	●
E2	Lead wire (300 mm) with surge suppressor/lamp	●
E20	Lead wire (500 mm) with surge suppressor/lamp	●
E21	Lead wire (1000 mm) with surge suppressor/lamp	●
E22	Lead wire (2000 mm) with surge suppressor/lamp	●
E23	Lead wire (3000 mm) with surge suppressor/lamp	●
E0N	Without lead wire (without socket)	●
E2N	Without lead wire (without socket) with surge suppressor/lamp	●
E3	No lead wire (with socket/terminal), surge suppressor/indicator lamp	●
E1	Without lead wire (socket/terminal attached)	●

EJ type connector (socket with cover, upward/lateral common)		
E01J	Lead wire (1000 mm)	●
E02J	Lead wire (2000 mm)	●
E03J	Lead wire (3000 mm)	●
E21J	Lead wire (1000 mm) with surge suppressor/lamp	●
E22J	Lead wire (2000 mm) with surge suppressor/lamp	●
E23J	Lead wire (3000 mm) with surge suppressor/lamp	●

E Option		
Blank	None	●
K	External pilot	●
A	Coolant proof	●
F	A/B port filter built in	●

F Voltage		
1	100 VAC	●
3	24 VDC	●
4	12 VDC	●
5	110 VAC	●

⚠ Precautions for model No. selection

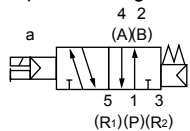
*1: P/R port is G thread.

*2: P/R port is NPT thread.

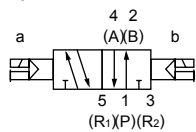
JIS symbol

● 5-port valve

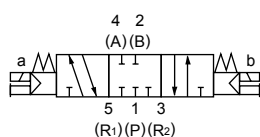
2-position single



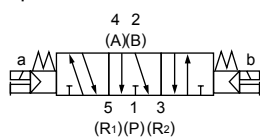
2-position double



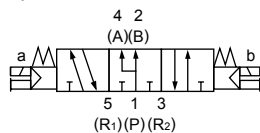
3-position all ports closed

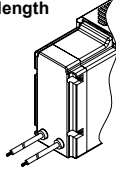
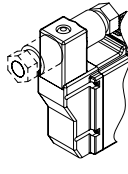
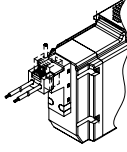
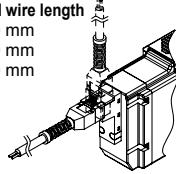
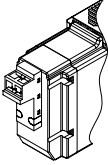
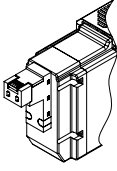


3-position A/B/R connection



3-position P/A/B connection



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

4GB4 Series

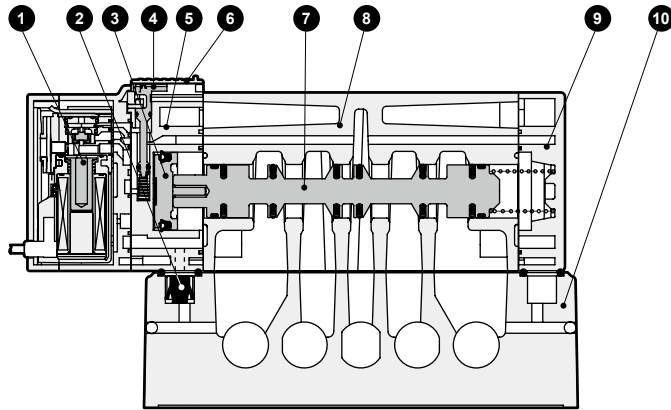
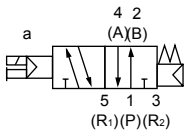
Single valve; base piping

Internal structure and parts list

- 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

4GB410

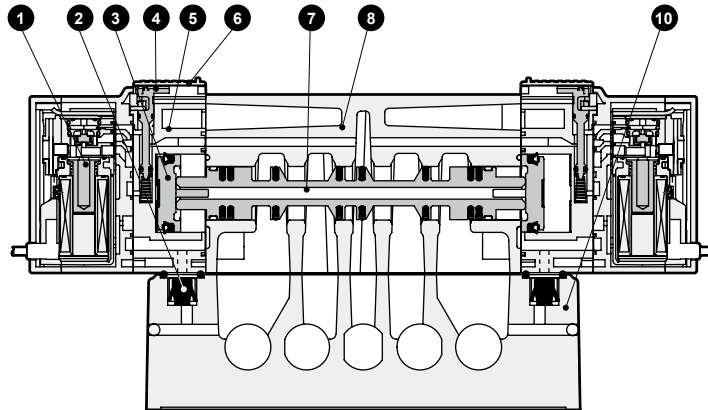
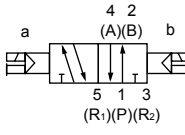
- 2-position single
- Grommet lead wire (blank)



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

4GB420

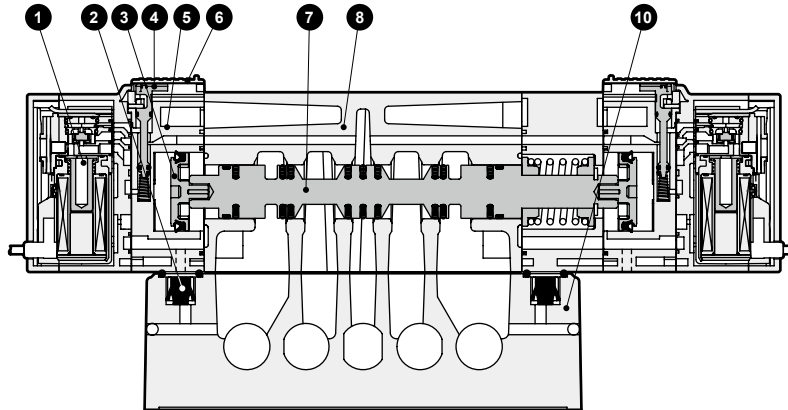
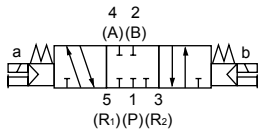
- 2-position double
- Grommet lead wire (blank)



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

4GB4³/₄/₅0

- 3-position
- Grommet lead wire (blank)



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

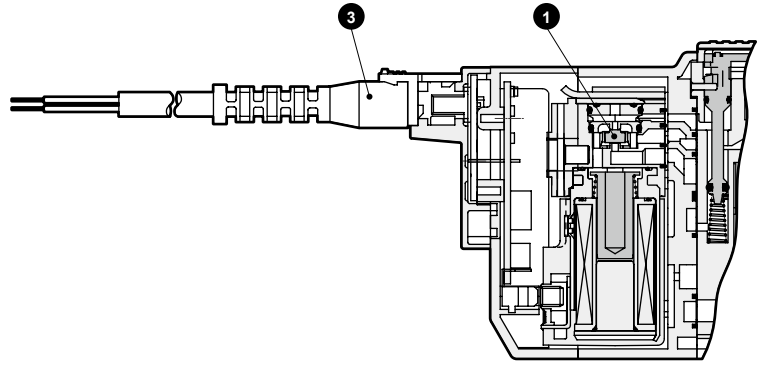
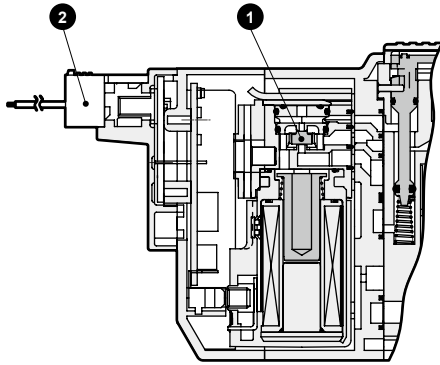
Main parts list

No.	Part name	Material	No.	Part name	Material
1	Coil assembly	-	6	Manual protection cover	PBT
2	Check valve	H-NBR	7	Spool assembly	-
3	Piston assembly	-	8	Body	Aluminum
4	Manual override	-	9	Cap	PA
5	Piston chamber	PBT	10	Discrete sub-plate	Aluminum

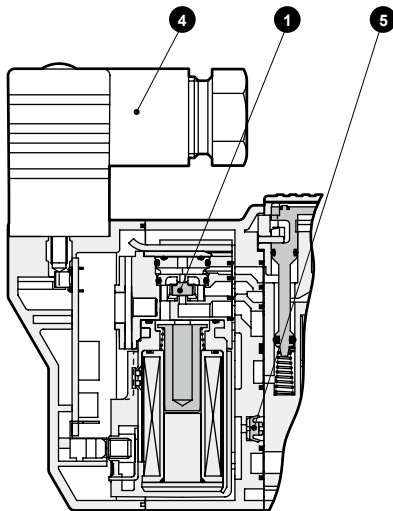
Internal structure and parts list/dimensions (electrical connections)

● E type connector E□□

● EJ type connector E□□J



● DIN terminal box B



Main parts list

No.	Part name	Material	No.	Part name	Material
1	Coil assembly	-	4	DIN terminal box assembly	-
2	E type connector socket assembly	-	5	Check valve	NBR
3	Socket assembly with cover	-			

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

4GB4 Series

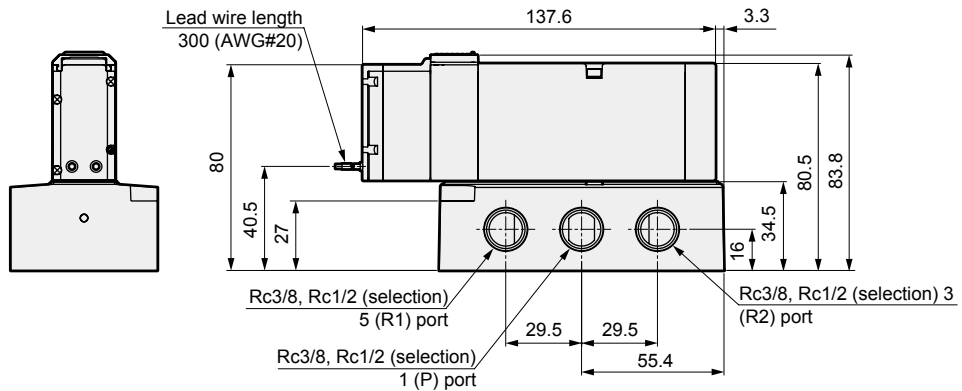
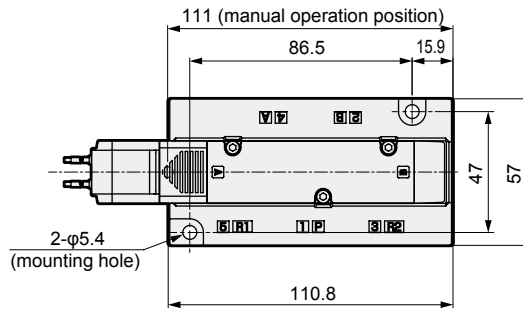
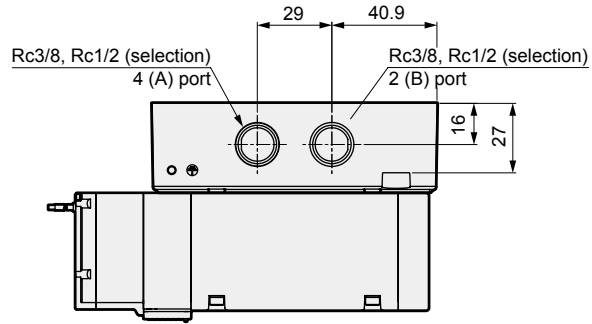
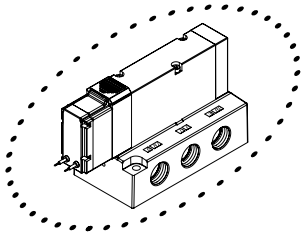
Single valve; base piping

Dimensions

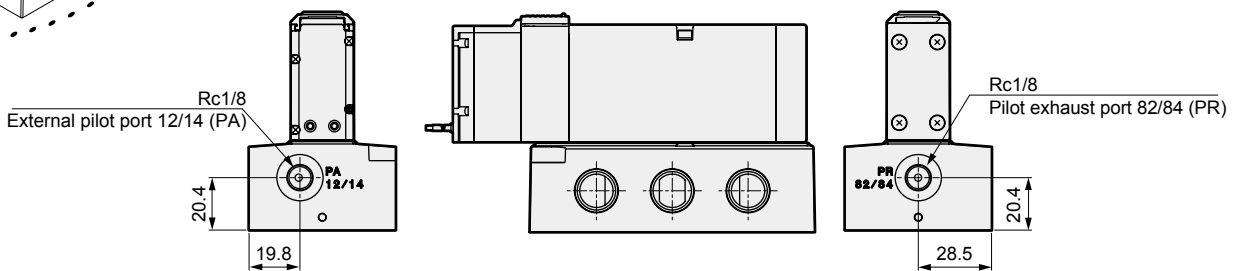
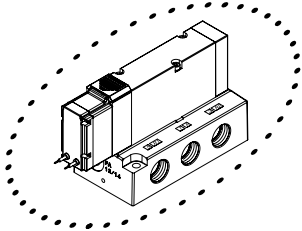
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4**
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F*0EX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

4GB410

● 2-position single grommet lead wire (blank)

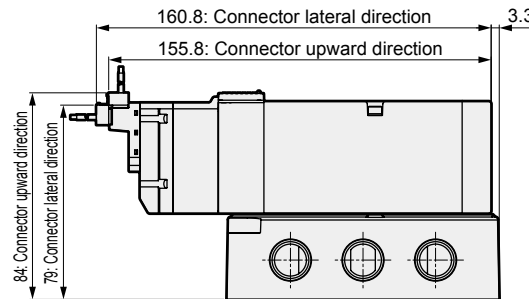
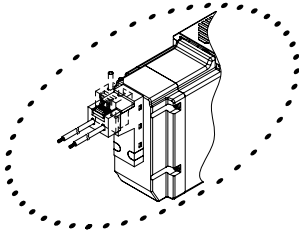


● External pilot (K)

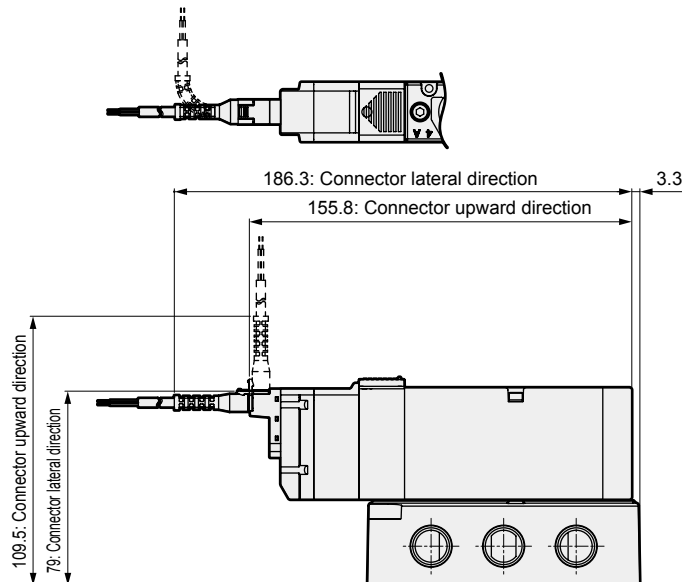
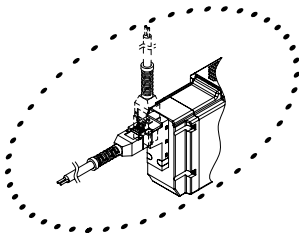


Dimensions

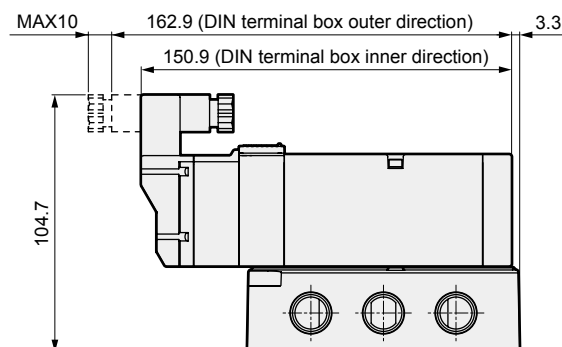
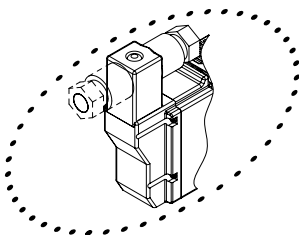
● E type connector (E)



● EJ type connector (E**J)



● 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

4GB4 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

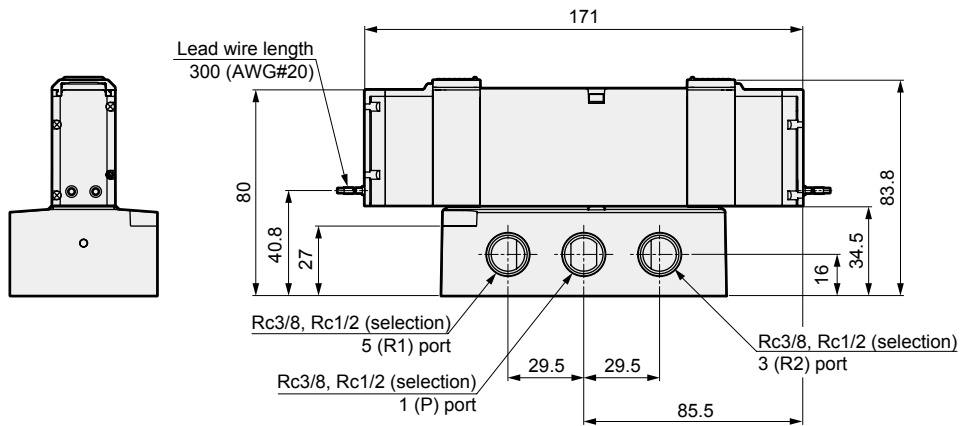
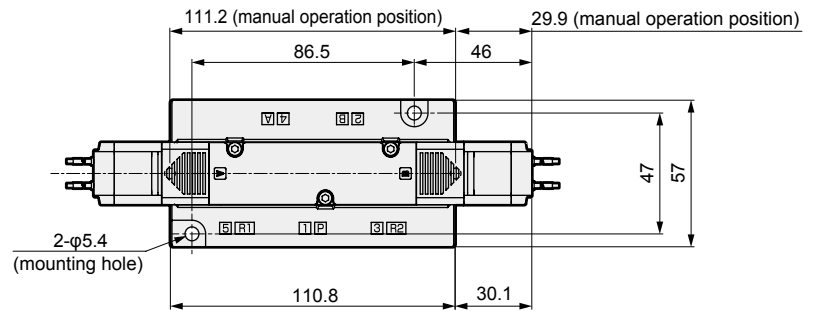
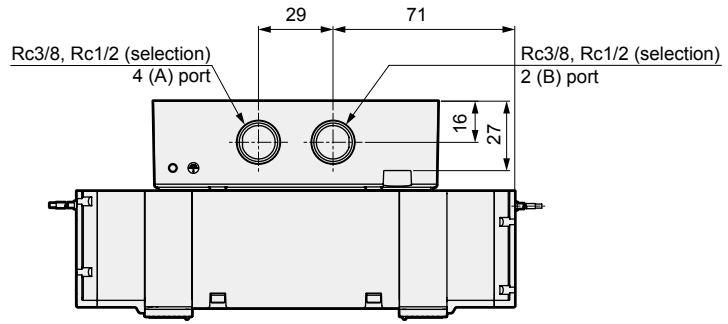
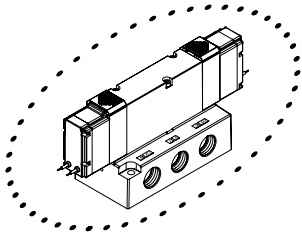
TotAirSys (Total Air)

TotAirSys (Gamma)

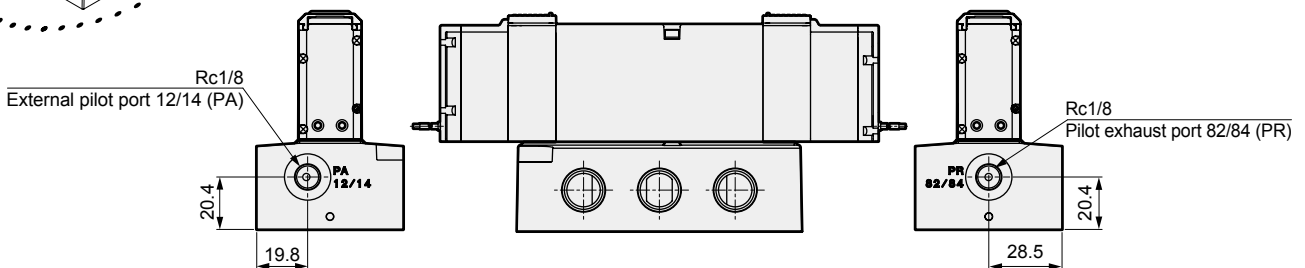
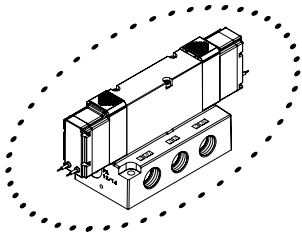
Ending

4GB420

- 2-position double grommet lead wire (blank)

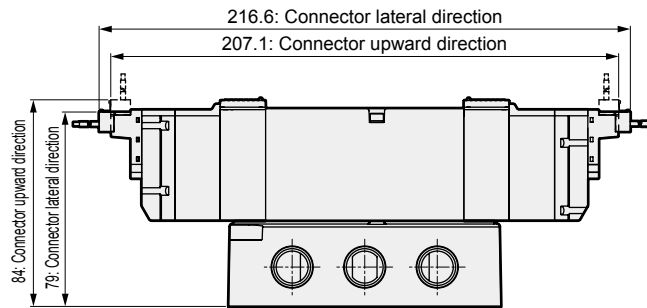
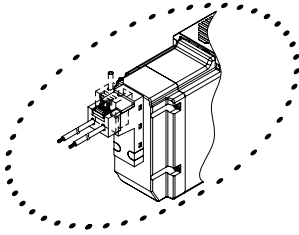


- External pilot (K)

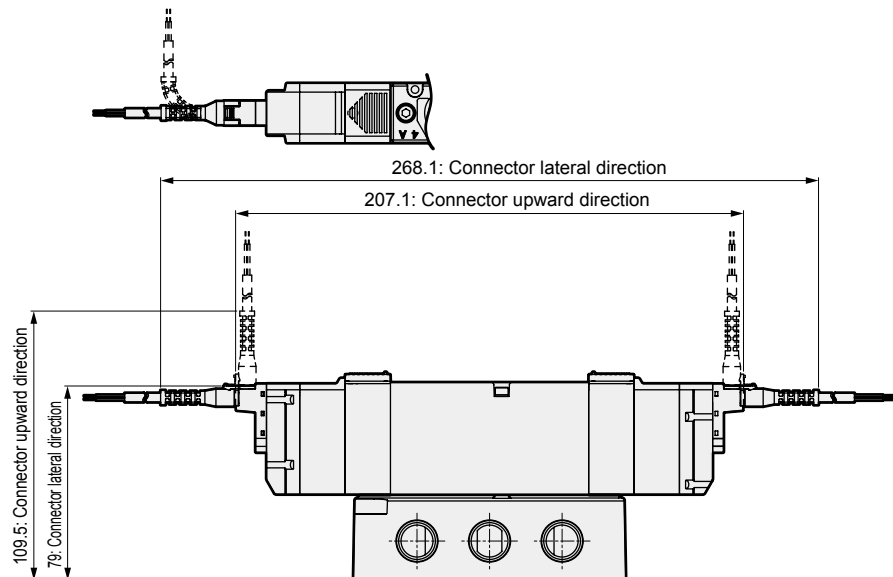
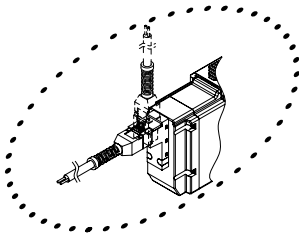


Dimensions

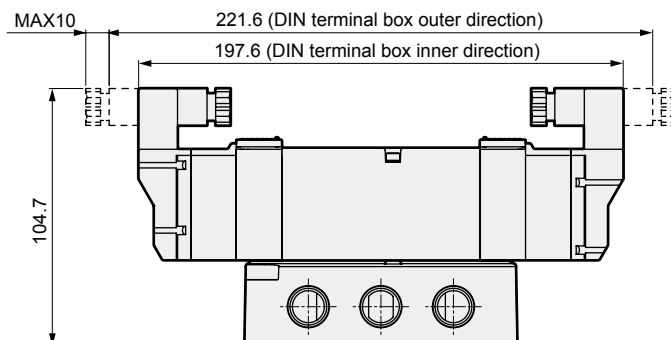
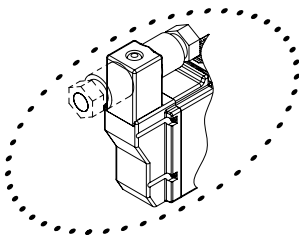
● E type connector (E)



● EJ type connector (E**J)



● 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

4GB4 Series

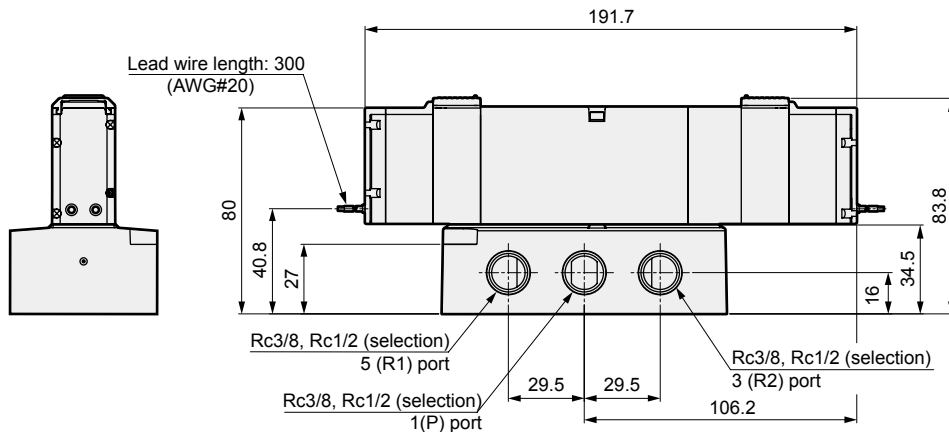
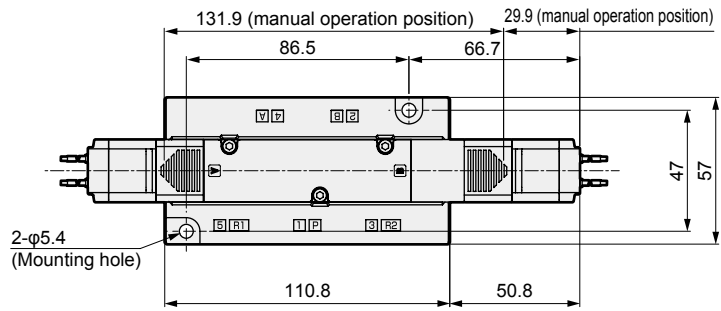
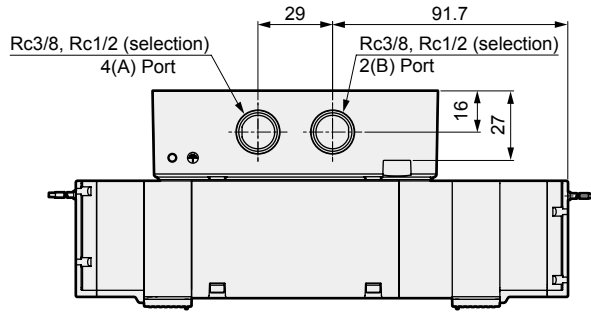
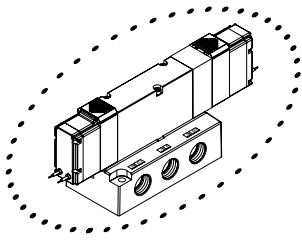
Single valve; base piping

Dimensions

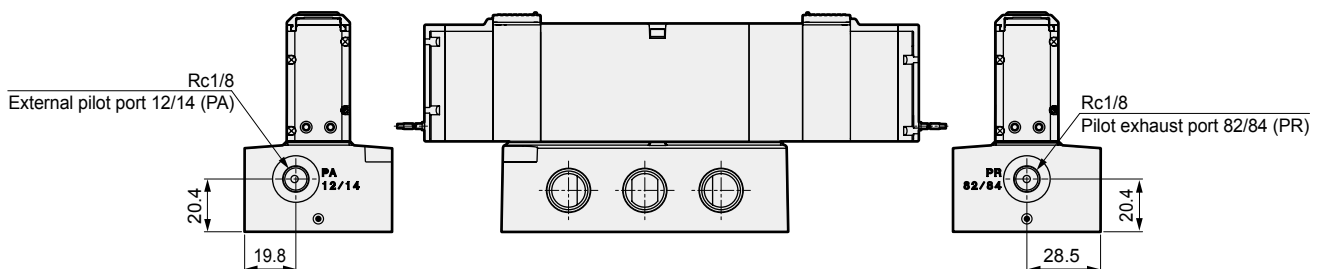
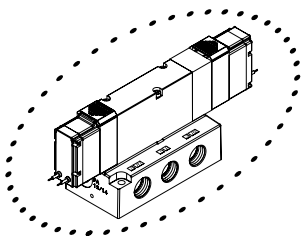
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F*0EX
-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

4GB4³/₄/₅ 0

● 3-position grommet lead wire (blank)

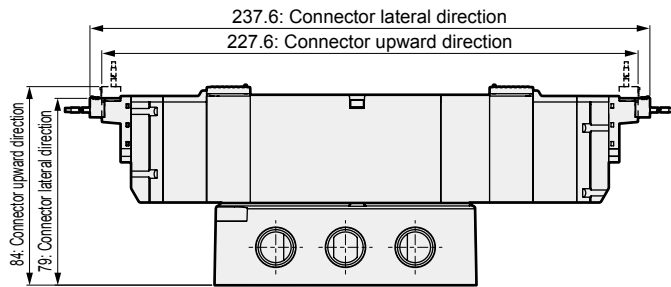
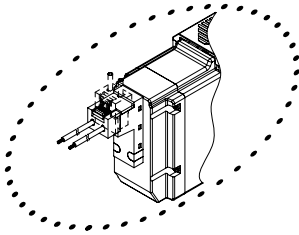


● External pilot (K)

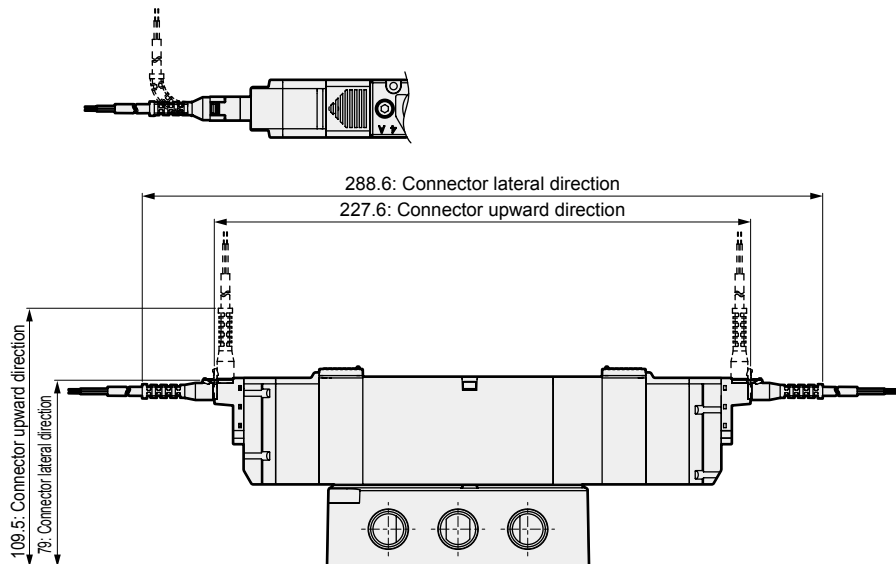
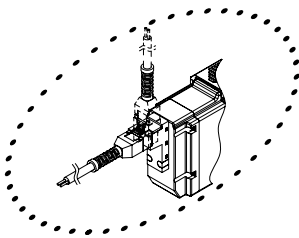


Dimensions

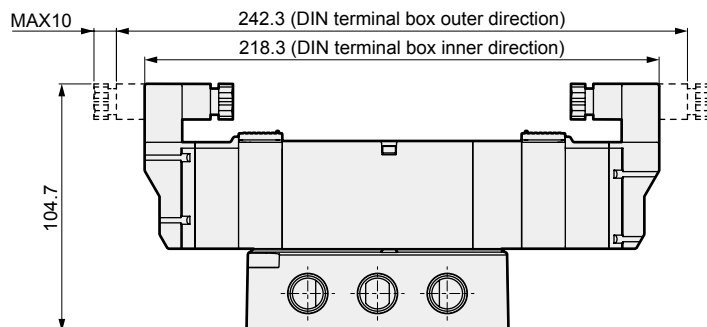
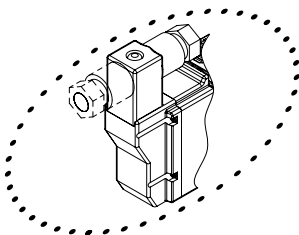
● E type connector (E)



● EJ type connector (E**J)



● 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