

3, 5 port pilot operated valve 4GA/B • 4GD/E R Series



3,5 PORT PILOT OPERATED VALVE 4GA/B 4GD/E R Series

**User Friendly.
Upgraded Performance.**



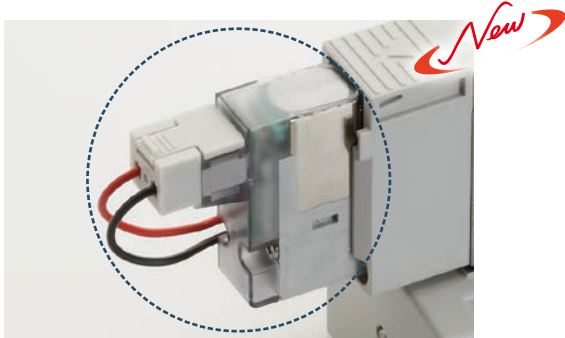
New 4G! Start!

The new 4G is further evolved while inheriting the conventional 4G series concept. It starts here.

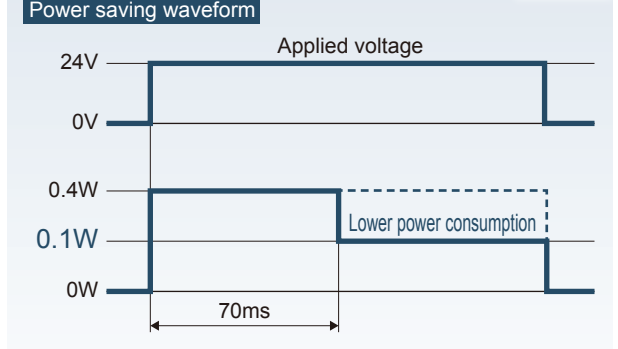
Power consumption 0.1w Minimal heat generated with integrated energy saving circuit 4GAB	Power consumption 0.35w Standard products
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Power Consumption

Continuous energization OK (single solenoid type)
Improved Solenoid Design. **4GAB**



Lower power consumption **4GAB**

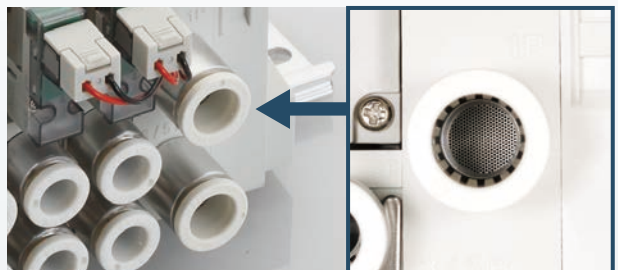


Safety

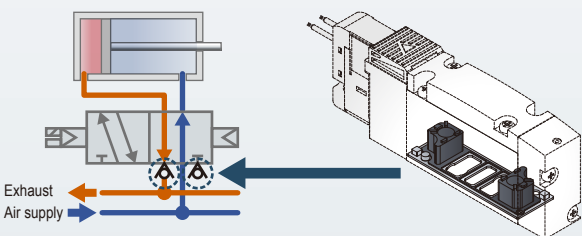
Manual override protection
Manual override with protective covers.



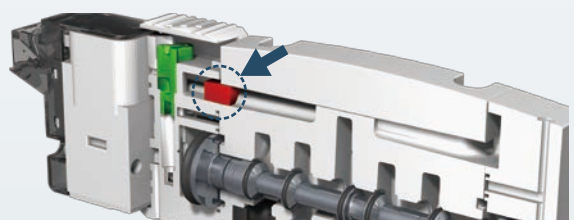
Contamination prevention
Filter standard equipment
(Available on A and B ports as an option)

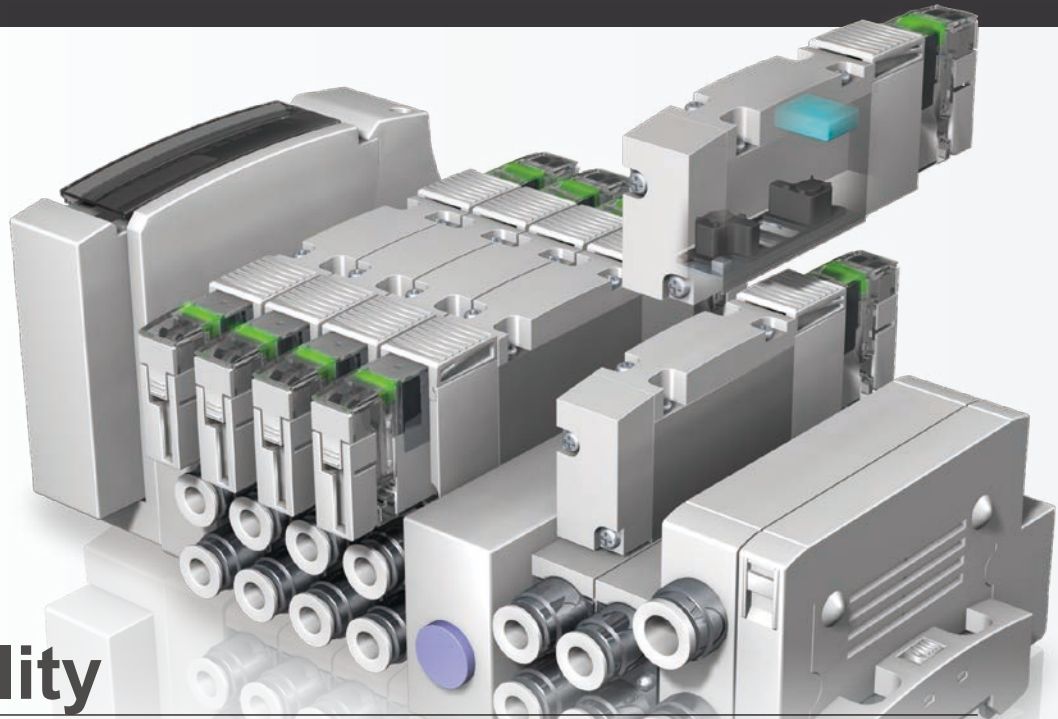


Potential for exhaust back-pressure eliminated.
Exhaust malfunction prevention valve.
Standard feature in both metal and plastic base designs.



Internal pilot filter is standard equipment.





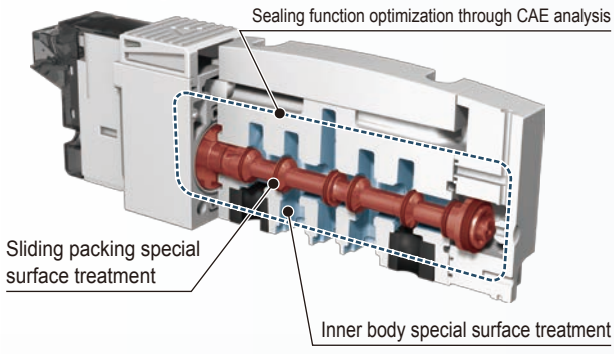
Reliability

Low friction design with improved life cycle rating
 Excellent response time and long life achieved with the main spool. **4GAB**

New

Life Rating
100 million cycles or more
 Single solenoid, through our predetermined conditions
4GAB

Response time
12±2ms
 4G1 test results

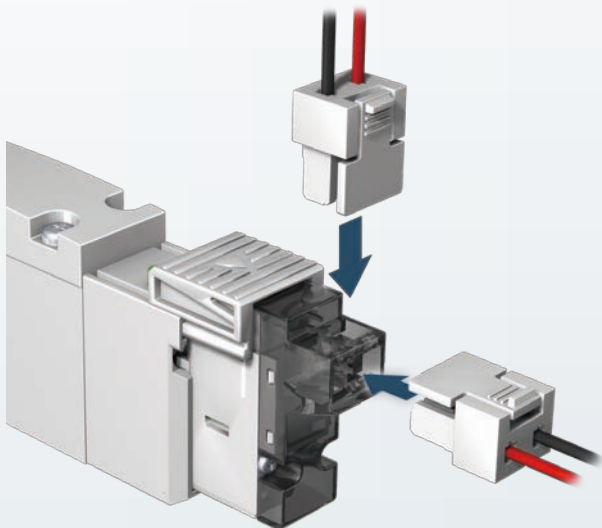


Improved response even after weekend shutdown

Smooth start-up even after a prolonged shut-down. **4GAB**

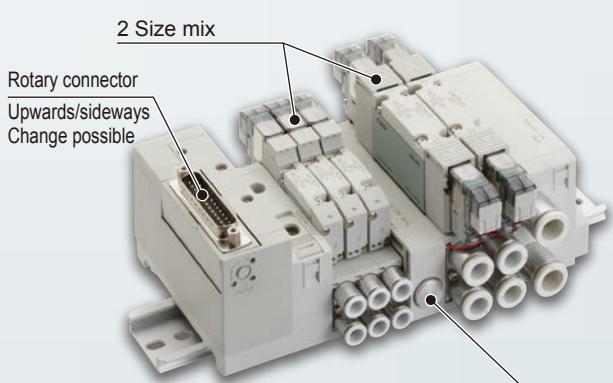
Flexible Functionality

Two-way wiring connector of top or side.
 Wire connection orientation is easily adjusted in the field.



Manifold flexibility

Manifolds can include a mixture of valve sizes and port sizes.



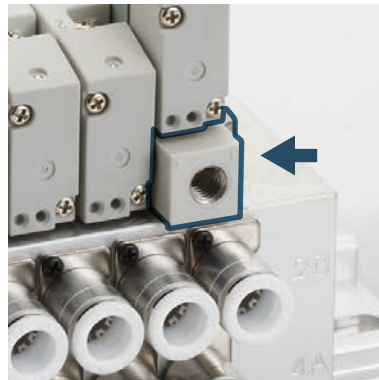
Manifolds can include a mixture of valve sizes and port sizes

Variety of options



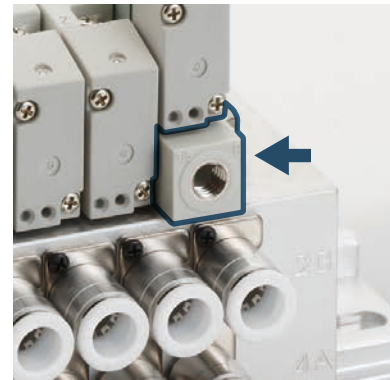
Individual Valve shut-off

Valves are individually replaceable without stopping operation of the production line!



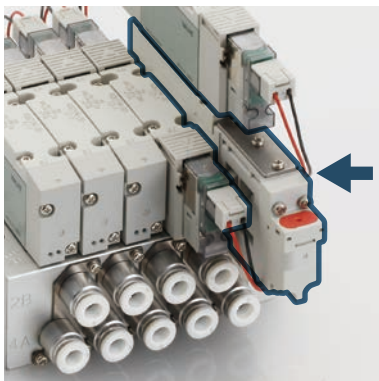
Individual supply spacer

Ideal for cylinder thrust adjustment in the individual valve pressure increase/decrease!



Exhaust spacer

Prevent malfunction of Single-acting cylinders in the individual exhaust!



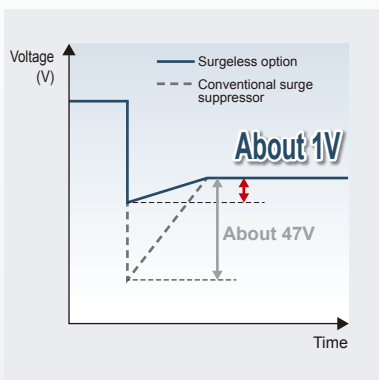
Pilot check valve spacer

For intermediate valve stoppage. Provides a short-term positive lock of a double-acting cylinder



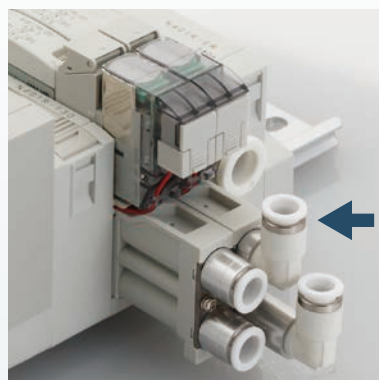
More valve porting options

4G1 now includes 8mm tubing (C8)
4G2 now includes 10mm tubing



Surge Protection

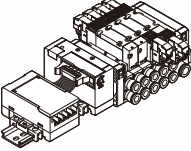
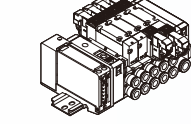
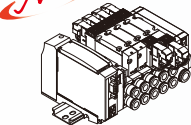
The coil surge voltage is reduced about 1V to protect the output contacts!



Elbow fitting option for block manifold

Improve the flexibility of valve installation with the addition of piping direction

Automation communication protocols supported

		CC-Link	Compo Bus/S	S-LINK	Uniwire H system	Device Net	SAVE NET	Compo Net	PROFI BUS-DP	Ether CAT	EtherNet /IP
	OPP3 Output 8/16points	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	M4G Metal Manifold										
	MN4G Resin Manifold	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OPP4 Output 8/16points Thin type										
	OPP7 Output 16/32 points Thin type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	M4G Metal Manifold										
	MN4G Resin Manifold										

Applications/environment table

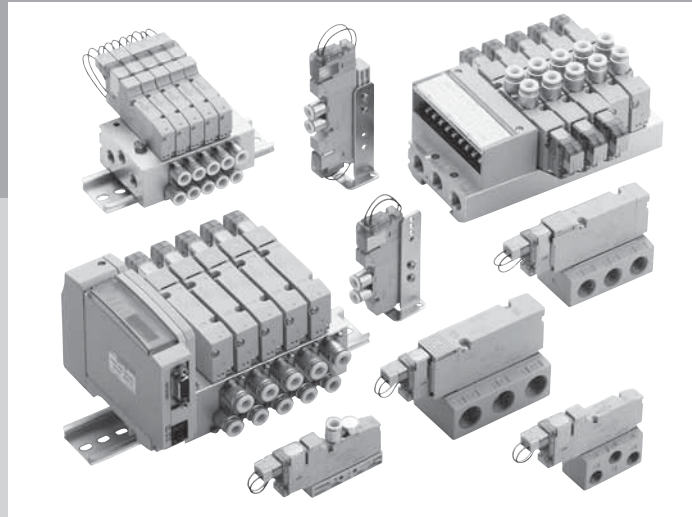
		Multi function type 4GA/B R	Standard type 4GD/E R
Reliability	Air quality		
	Ultra-dry air • N2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Dry air	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Oil contaminated air/ low ozone	<input type="checkbox"/>	<input type="checkbox"/>
	Drain air	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Countermeasure for the use after weekend shutdown	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Low vacuum support	<input type="checkbox"/>	
Safety	Exhaust malfunction prevention function	<input type="checkbox"/>	<input type="checkbox"/>
	Manual override protective cover	<input type="checkbox"/>	<input type="checkbox"/>
	Built-in contamination protection	<input type="checkbox"/>	<input type="checkbox"/>
Usability	90 degree elbow quick to connect fittings	<input type="checkbox"/>	
	External pilot	<input type="checkbox"/>	
	Two-way wiring connector of top/side	<input type="checkbox"/>	<input type="checkbox"/>
	Manual operation without tools	<input type="checkbox"/>	<input type="checkbox"/>

Recommended

4GD1 to 3 & 4GE1 to 3

3, 5 port pilot operated valve

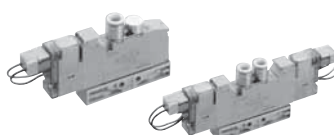
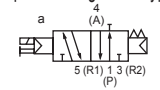
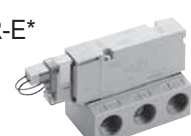
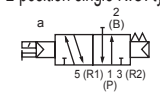
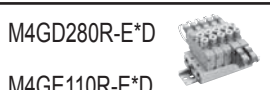

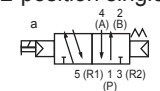
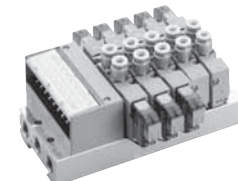

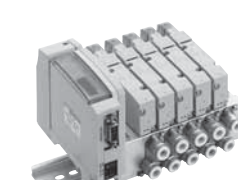
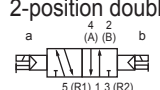
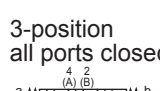


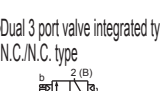
Metal base



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4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

Series appearance		Model no.	Position No. of solenoid JIS symbol	Valve performance		Voltage (v)				
				Flow rate characteristics (dm ³ /(s·bar)) Note 1	Applicable cylinder bore size (φ)					
Discrete	3GD110R-E* 4GD120R-E* 	Body piping	3 port	3GD1	● 3 port valves 2-position single N.C. type 	0.66 to 0.70	20 to 40	100 VAC 200 VAC 24 VDC 12 VDC (Note 2)		
			5 port	3GD2		2.2 to 2.7	40 to 80			
				3GD3		3.9	63 to 100			
		3 port	4GD1	0.66 to 0.70		20 to 40				
		5 port	4GD2	2.4 to 2.7		40 to 80				
			4GD3	3.2 to 4.0		63 to 100				
	4GE310R-E* 	Base piping	3 port	3GE1	2-position single N.O. type 	1.0	20 to 40			
			5 port	3GE2		2.1	40 to 80			
				4GE1		1.1 to 1.3	20 to 40			
			4GE2	2.2 to 2.5		40 to 80				
			4GE3	3.2 to 4.2		63 to 100				
Individual wiring manifold	M4GD280R-E*D M4GE110R-E*D  M4GE280R-B 	Body piping	Direct mount type DIN rail mount type (-D)	M4GD1	● 5 port valves 2-position single 	0.66 to 1.0	20 to 40	100 VAC 200 VAC 24 VDC 12 VDC (Note 2)		
				M4GD2		1.7 to 2.5	40 to 80			
				M4GD3		2.5 to 3.3	63 to 100			
	Sub-base piping	Direct mount type DIN rail mount type (-D)	M4GE1	0.67 to 1.0		20 to 40				
			M4GE2	1.6 to 2.4		40 to 80				
			M4GE3	2.6 to 3.3		63 to 100				
Reduced wiring manifold	M4GD280R-T10  M4GD180R-T8*  M4GD180R-T8* 	Body piping	Direct mount type	Terminal block (-T1*) Connector type (-T30, T5*)	M4GD1	2-position double 	0.66 to 1.0	20 to 40	24 VDC 12 VDC	
					M4GD2		1.7 to 2.5	40 to 80		
					M4GD3		2.5 to 3.3	63 to 100		
			Serial transmission (-T8*)	M4GD1	0.66 to 1.0		20 to 40			
				M4GD2	1.7 to 2.5		40 to 80			
				M4GD3	2.5 to 3.3		63 to 100			
		DIN rail mount type	Terminal block (-T1*D) Connector type (-T30D, T5*D)	M4GD1	0.66 to 1.0	20 to 40	3-position all ports closed 	0.66 to 1.0	20 to 40	24 VDC
					M4GD2	1.7 to 2.5		40 to 80		
					M4GD3	2.5 to 3.3		63 to 100		
			Serial transmission (-T6*D) (-T8*D)	M4GD1	0.66 to 1.0	20 to 40				
				M4GD2	1.7 to 2.5	40 to 80				
				M4GD3	2.5 to 3.3	63 to 100				
	Base piping	Direct mount type	Terminal block (-T1*) Connector type (-T30, T5*)	M4GE1	3-position A/B/R Connection 	0.66 to 1.0	20 to 40	24 VDC 12 VDC		
						M4GE2	1.7 to 2.5		40 to 80	
						M4GE3	2.5 to 3.3		63 to 100	
			Serial transmission (-T8*)	M4GE1		0.67 to 1.0	20 to 40			
				M4GE2		1.6 to 2.4	40 to 80			
				M4GE3		2.6 to 3.3	63 to 100			
		DIN rail mount type	Terminal block (-T1*D) Connector type (-T30D, T5*D)	M4GE1	3-position P/A/B Connection 	0.67 to 1.0	20 to 40	24 VDC 12 VDC		
						M4GE2	1.6 to 2.4		40 to 80	
						M4GE3	2.6 to 3.3		63 to 100	
			Serial transmission (-T6*D) (-T8*D)	M4GE1		0.67 to 1.0	20 to 40			
				M4GE2		1.6 to 2.4	40 to 80			
				M4GE3		2.6 to 3.3	63 to 100			
Dual 3 port valve integrated type N.C./N.C. type				0.66 to 1.0	20 to 40	24 VDC				
				1.7 to 2.5	40 to 80					
				2.5 to 3.3	63 to 100					
				0.67 to 1.0	20 to 40					
				1.6 to 2.4	40 to 80					
				2.6 to 3.3	63 to 100					

4GD1 to 3 & 4GE1 to 3 Series

Series variation

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

Note 2: Grommet lead wire specifications are only for DC voltage.

Note 3: The dual 3-port integrated valve is compatible with 3GD1/2 and 3GE1/2.

Note 4: P/R port is M5 or Rc thread.

Note 5: Compatible only with the base piping type (2-position single).

Note 6: These are specifications for mounting of the reduced wiring manifold. Only 12/24 VDC is supported.

Switching position				A/B Piping port (Note 4)										Electrical connections										Reference page																			
2-position		3-position		Push-in fitting				Push-in fitting L (upward) (Note 5)				Push-in fitting L type (downward)		Female thread		Discrete, individual wiring				Reduced wiring																							
Normally closed	Normally open	Single	Double	All ports closed	ABR connection	PAB connection	Dual 3-port valves integrated type (Note 3)	Mix	φ4	φ6	φ8	φ10	φ4	φ6	φ8	φ10	φ4	φ6	φ8	φ10	M 5	Rc 1/8	Rc 1/4		Rc 3/8	Grommet lead (Note 2)	E type connector	EJ type connector	DIN terminal box	A type connector (Note 6)	Common terminal block	D-sub connector	Flat cable with power supply terminal	Flat cable without power supply terminal	Serial transmission	Serial transmission							
									C4	C6	C8	C10	CL4	CL6	CL8	CL10	CD4	CD6	CD8	CD10	M5	O6	O8	10	Blank	E*	EJ	B*	A2N	T1*	T30	T50	T5*	T6*	T8*								
●	●						●		●	●											●				●	●	●	●											338				
●	●						●		●	●											●				●	●	●	●													378		
●	●						●		●	●											●				●	●	●	●														404	
●	●						●		●	●											●				●	●	●	●														416	
●	●						●		●	●											●				●	●	●	●														430	
●	●						●		●	●											●				●	●	●	●														430	
●	●						●		●	●											●				●	●	●	●															450
●	●						●		●	●											●				●	●	●	●															450

4GAB

M4GAB

MN4GAB

4GAB Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety precautions

Manifold Specifications

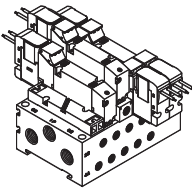
4GD1 to 3 & 4GE1 to 3 Series

		Electrical connections				Manual operating device	Other options	
		Discrete valve/individual wiring manifold		Reduced wiring manifold				
4GAB	Blank	Grommet lead wire Ⓜ	E3 E type connector with socket/terminal ⓁⓈ	T10 T11 Common terminal block type (left side) M3 thread specifications/push tightening specifications	T51 T52 T53 Flat cable power supply without terminal (left side)	Blank	Non-locking/locking common type	H With malfunction prevention valve
M4GAB	●Lead wire length 300mm					(standard)		Provided as standard for pilot exhaust.
MN4GAB	E0	E type connector Ⓜ	A2N A type connector downward without socket	T10R T11R Common terminal block type (right side) M3 thread specifications/push tightening specifications	T51R T52R T53R Flat cable power supply without terminal (right side)		P	Mounting plate
4GAB	●Lead wire length 300mm 500mm 1000mm 2000mm 3000mm					(1) For non-locking, push to turn ON, release to turn OFF		Discrete (only body piping)
Master valve	E0N	E type connector without socket	●For 100 VAC, dimension (a) is 3.5 mm longer than 12/24 VDC.	T30 D sub-connector type (left side)	T6 ⁰ ₁ Serial transmission type	(2) For locking, PUSH and turn 90° clockwise to hold the ON state. Turn counterclockwise to unlock OFF	A	Ozone/cutting oil proof
4GD/E								Select for cutting oil inflow and ozone measures.
M4GD/E	E1	E type connector with socket terminal	B BN DIN terminal box (BN: Without terminal box)	T30R D sub-connector type (right side)	T8 ¹ ₂ Serial transmission (Thin type)		F	AB port filter integrated
MN4GD/E								Filter
Technical data	E2	E type connector ⓂⓁⓈ	E0*J Ⓜ EJ type connector	T50 Flat cable power supply with terminal (left side)				Pilot check valve (separate type)
Safety precautions	●Lead wire length 300mm 500mm 1000mm 2000mm 3000mm							
Manifold Specifications	E2N	E type connector without socket ⓁⓈ	E2*J ⓂⓁⓈ EJ type connector	T50R Flat cable with power supply terminal (right side)				

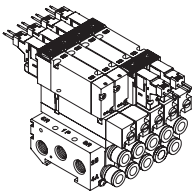
Electric connection circuit diagram

Other options

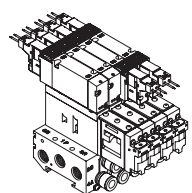
Z1 Supply spacer
Z3 Exhaust spacer



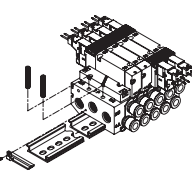
Z2 In stop valve spacer

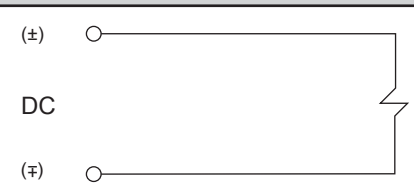
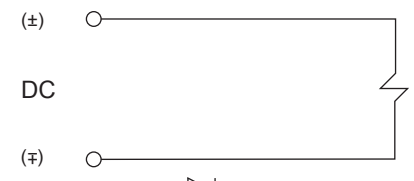
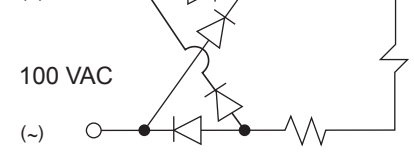
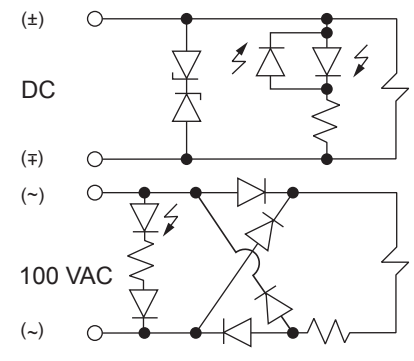
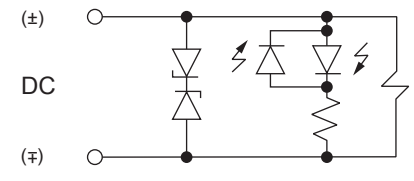
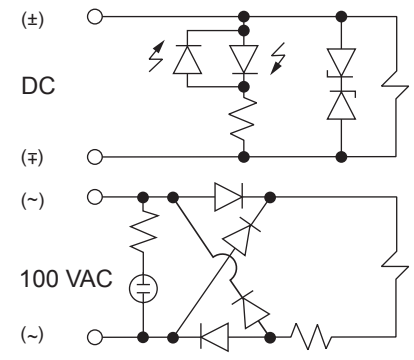
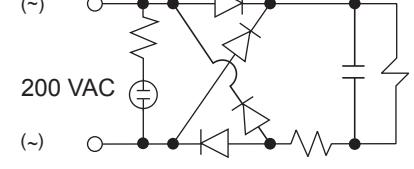


Z6 Spacer type
Pilot check valve



D DIN rail mount



	Electrical connection	Without lead wire					Circuit diagram
		Without lead wire	With lead wire	With light	With surge suppressor	Without socket	
Blank	Grommet lead wire		●				
E0	E type connector		●				
E0*J	EJ type connector		●				
E0N	E type connector					●	
E1	E type connector	●					
E2	E type connector		●	●	●		
E2*J	EJ type connector		●	●	●		
E2N	E type connector			●	●	●	
E3	E type connector	●		●	●		
A2N	A type connector			●	●	●	
B	DIN terminal box	●		●	●		
BN	DIN terminal box (Without terminal box)	●			●		
							

4GAB

M4GAB/B

MN4GAB/B

4GAB
Master valve

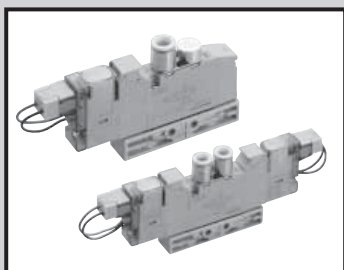
4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautionsManifold
Specifications



Discrete valve
Body piping

3GD1,2,3 & 4GD1,2,3 Series

● Applicable cylinder bore size: $\phi 20$ to $\phi 100$



4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

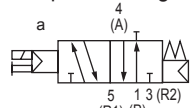
Technical data

Safety
precautions

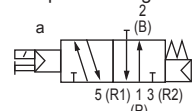
Manifold
Specifications

JIS symbol

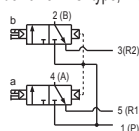
- 3 port valve
2-position single N.C. type



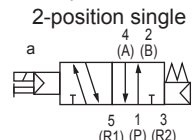
- 2-position single NO type



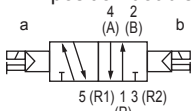
- Dual 3 port valve integrated type
(A side valve: N.C. type, B side valve: N.C. type)



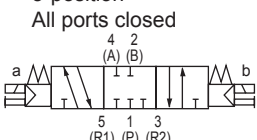
- 5 port valve
2-position single



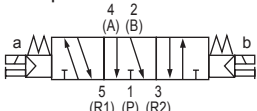
- 2-position double



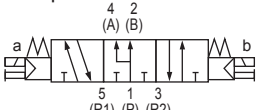
- 3-position
All ports closed



- 3-position A/B/R connection



- 3-position P/A/B connection



Common specifications

Descriptions	
Valve type and operation method	Pilot-operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7
Min. working pressure MPa	0.2
Withstanding pressure MPa	1.05
Ambient temperature °C	-5 to 55 (no freezing)
Fluid temperature °C	5 to 55
Manual operating device	Non-locking/locking common type
Pilot exhaust method	Main valve/pilot valve common exhaust type
Lubrication Note 1	Not required
Degree of protection Note 2	Dust proof
Vibration/shock m/s ²	50 or less / 300 or less
Working environment	Containing corrosive gas is not permissible

Note 1 Use the turbine oil Class 1 ISO VG32 if lubricated. Excessive or intermittent lubrication results in unstable operation.

Note 2 Avoid water drops or oil, etc. during use. IP65 (jet-proof type) applies for DIN terminal box specifications. Note that the specified adaptive cord outer diameter and tightening torque must be used for fixing.

Electrical specification

Descriptions				
Rated voltage	24 VDC	12 VDC	100 VAC	200 VAC
Voltage fluctuation range	±10%			
Holding current A (Note 3)	0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
Power consumption W (Note 3)	0.35 (0.40)		-	
Apparent power VA (Note 3) (Note 4)	-		0.93 (0.98)	1.26
Thermal class	B			
Surge suppressor	Option			
Indicator	Light (option)			

Note 3: Values in () apply when a light is attached.

Individual specifications

Descriptions		3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
Port size	A/B port	Push-in fitting $\phi 4$, $\phi 6$	Push-in fitting $\phi 4$, $\phi 6$, $\phi 8$	Push-in fitting $\phi 6$, $\phi 8$, $\phi 10$	Push-in fitting $\phi 4$, $\phi 6$	Push-in fitting $\phi 4$, $\phi 6$, $\phi 8$	Push-in fitting $\phi 6$, $\phi 8$, $\phi 10$
	P/R1/R2 port	M5	Rc1/8	Rc1/4	M5	Rc1/8	Rc1/4

Descriptions		3GD1		3GD2		3GD3		4GD1		4GD2		4GD3		
		ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	
Response time ms	Dual 3 port valve integrated type	12	15	15	30	-	-	-	-	-	-	-	-	
	2-position	Single	15	25	20	30	25	40	15	25	20	30	25	40
		Double	-	-	-	-	-	-	15	-	20	-	25	-
3-position	ABR connection	-	-	-	-	-	-	20	30	25	35	35	50	

Values including a light surge suppressor. The response time is the value at 0.5 MPa supply pressure, 20°C, with no lubrication. It varies depending on the pressure and the lubricant quality.

Descriptions			3GD1	3GD2	3GD3	4GD1	4GD2	4GD3	
Weight g	2-position	Single	Grommet lead wire	48 (41)	110 (80)	144 (102)	48 (41)	115 (85)	153 (111)
			E type connector	50 (43)	112 (82)	146 (104)	50 (43)	117 (87)	155 (113)
			DIN terminal box	-	147 (117)	178 (136)	-	152 (122)	187 (145)
		Double	Grommet lead wire	-	-	-	65 (58)	133 (103)	175 (129)
			E type connector	-	-	-	69 (62)	137 (107)	179 (133)
			DIN terminal box	-	-	-	-	176 (146)	215 (169)
	3-position closed	Grommet lead wire	-	-	-	67 (60)	145 (115)	184 (142)	
		E type connector	-	-	-	71 (64)	149 (119)	188 (146)	
		DIN terminal box	-	-	-	-	188 (158)	224 (182)	

• Values in () do not include a piping adaptor. Values for E type connector include the socket assembly (with 300 mm lead wire). For EJ type connector, add 16 g/connector to E type connector weight.

• The weight of dual 3 port valve integrated type is the same as that of 2-position double.

3GD1, 2, 3 & 4GD1, 2, 3 Series

Discrete valve; body piping

Flow characteristics

Model no.	Valve Position	P→A/B		A/B→R1/R2		
		C (dm ³ /(s·bar))	b	C (dm ³ /(s·bar))	b	
3GD1	2-position	1.2	0.47	0.7	0.39	
	Dual 3 port valve integrated type	0.98	0.45	0.66	0.38	
3GD2	2-position	2.4	0.33	2.7	0.28	
	Dual 3 port valve integrated type	1.8	0.29	2.2	0.34	
3GD3	2-position	3.4	0.29	3.9	0.27	
4GD1	2-position	1.2	0.47	0.70	0.39	
	3-position	All ports closed	1.1	0.39	0.66	0.29
		ABR connection	1.1	0.33	0.68	0.31
PAB connection	1.3	0.61	0.67	0.43		
4GD2	2-position	2.4	0.33	2.7	0.28	
	3-position	All ports closed	2.2	0.28	2.4	0.27
		ABR connection	2.3	0.26	2.7	0.32
		PAB connection	2.5	0.38	2.4	0.33
4GD3	2-position	3.4	0.29	3.9	0.27	
	3-position	All ports closed	3.1	0.27	3.2	0.32
		ABR connection	3.1	0.33	4.0	0.25
		PAB connection	3.5	0.43	3.3	0.39

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

Ozone specifications / Coolant proof specifications

Select the option "A" of (E) in how to order on page 340.

Specifications for secondary battery

● In order to be applicable for secondary battery manufacturing process, confine materials for air passage and sliding section

** - Voltage - **P4**

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

3GD1, 2, 3 & 4GD1, 2, 3 Series

Discrete valve; body piping

How to order

4GAB **4GD1** **1** **0 R** - **C6** - **E2** - **1**

3GD1 **1** **0 R** - **C6** - **E2** - **1**

● Discrete valve for mounting base

M4GAB **4GD1** **1** **9 R** - **C6** - **E2** **H** - **3**

● Discrete 3 port valve for mounting base

MN4GAB **3GD1** **1** **9 R** - **C6** - **E2** **H** **C** - **3**

A Model no.

B Valve Position

C Port size

D Electrical connections
Refer to page 337 for the circuit diagram with surge suppressor/light.

E Option

F Pilot exhaust method

G Voltage

A Model No.					
3GD1	3GD2	3GD3	4GD1	4GD2	4GD3

Symbol	Descriptions	3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
B Valve 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				●	●	●
1	2-position single normally closed (Note 1)	●	●	●			
11	2-position single normally open (Note 1)	●	●	●			
66	Dual 3 port valve integrated type (Note2)	●	●				
	A side valve: Normally closed						
	B side valve: Normally closed						

C Port size							
Port	4 (A), 2 (B) port	P/R1/R2 port (1) = M5 (2) = Rc1/8 (3)=Rc1/4					
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)

D Electric connection	
Refer to the electrical connection list on next page.	

E Option							
Blank	Non-locking/locking common manual override	●	●	●	●	●	●
H	With malfunction prevention valve (Note 3)	●	●	●	●	●	●
P	Mounting plate	●	●	●	●	●	●
A	Ozone/cutting oil proof	●	●	●	●	●	●
F	A/B port filter integrated (Note 4)	●	●	●	●	●	●

F Pilot exhaust method							
Blank	Common exhaust type (Pilot exhaust check valve integrated)	●	●	●	●	●	●
C	Open type	○	○	○	○	○	○

G Voltage							
1	100 VAC (rectifier integrated)	●	●	●	●	●	●
2	200 VAC (rectifier integrated) (Note 5)		●	●		●	●
3	24 VDC	●	●	●	●	●	●
4	12 VDC	●	●	●	●	●	●

is not available.

○ Contact CKD for price and availability.

⚠ Note on model no. selection

Note 1 For 3GD normally closed type, the piping connection 2 (B) and 3 (R2) ports are plugged.

For 3GD normally open type, avoid plugging 5 (R1) port.

Not doing so could cause malfunctions.

Note 2 Dimensions are the same as the respective 2-position double.

Note 3 3-position all ports closed and PAB connection are not provided with malfunction prevention valve. Refer to page 628 for details on malfunction prevention valve.

Note 4 The P port has a filter built inside as a standard.

Note 5 Only the DIN terminal box are supported.

4GAB
M4GAB
MN4GAB
4GAB
Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety
precautions
Manifold
Specifications

3GD1, 2, 3 & 4GD1, 2, 3 Series

Discrete valve; body piping

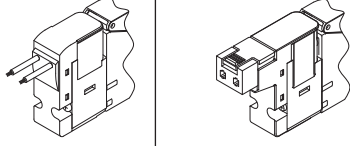
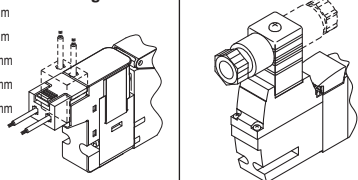
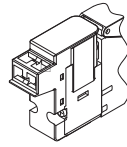
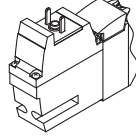
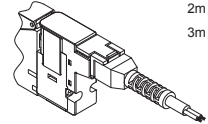
(Electrical connections list)

		A Model No.					
		3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
D Electric connection							
Blank	Grommet lead wire (300 mm) (Note6)	●	●	●	●	●	●
B	DIN terminal box (Pg7) with surge suppressor/light (Note7)	●	●	●	●	●	●
BN	DIN terminal box (Pg7) (without terminal box) with surge suppressor (Note7)	●	●	●	●	●	●
E type connector (upward/lateral direction common)							
E0	Lead wire (300mm) (Note8)	●	●	●	●	●	●
E00	Lead wire (500mm) (Note8)	●	●	●	●	●	●
E01	Lead wire (1000mm) (Note8)	●	●	●	●	●	●
E02	Lead wire (2000mm) (Note8)	●	●	●	●	●	●
E03	Lead wire (3000mm) (Note8)	●	●	●	●	●	●
E0N	Without lead wire (without socket) (Note8)	●	●	●	●	●	●
E1	Without lead wire (with socket/terminal) (Note8)	●	●	●	●	●	●
E2	Lead wire (300 mm) with surge suppressor/light	●	●	●	●	●	●
E20	Lead wire (500 mm) with surge suppressor/light	●	●	●	●	●	●
E21	Lead wire (1000 mm) with surge suppressor/light	●	●	●	●	●	●
E22	Lead wire (2000 mm) with surge suppressor/light	●	●	●	●	●	●
E23	Lead wire (3000 mm) with surge suppressor/light	●	●	●	●	●	●
E2N	Without lead wire (without socket) with surge suppressor/light	●	●	●	●	●	●
E3	Without lead wire (with socket/terminal) with surge suppressor/light	●	●	●	●	●	●
EJ type connector (socket with cover, upward/lateral direction common)							
E01J	Lead wire (1000mm) (Note8)	●	●	●	●	●	●
E02J	Lead wire (2000mm) (Note8)	●	●	●	●	●	●
E03J	Lead wire (3000mm) (Note8)	●	●	●	●	●	●
E21J	Lead wire (1000 mm) with surge suppressor/light	●	●	●	●	●	●
E22J	Lead wire (2000 mm) with surge suppressor/light	●	●	●	●	●	●
E23J	Lead wire (3000 mm) with surge suppressor/light	●	●	●	●	●	●

Note 6 Grommet lead wire specifications are only for DC voltage.

Note 7 The light is also attached to the terminal box.

Note 8 AC voltage comes 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 300mm	
E0 E2	E type connector
B	DIN terminal box
● Lead wire length 300mm 500mm 1000mm 2000mm 3000mm	
E0N E2N	E type connector without socket
BN	DIN terminal box without terminal box
	
E0*J E2*J	EJ type connector
● Lead wire length 1m 2m 3m	

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

3GD1 Series

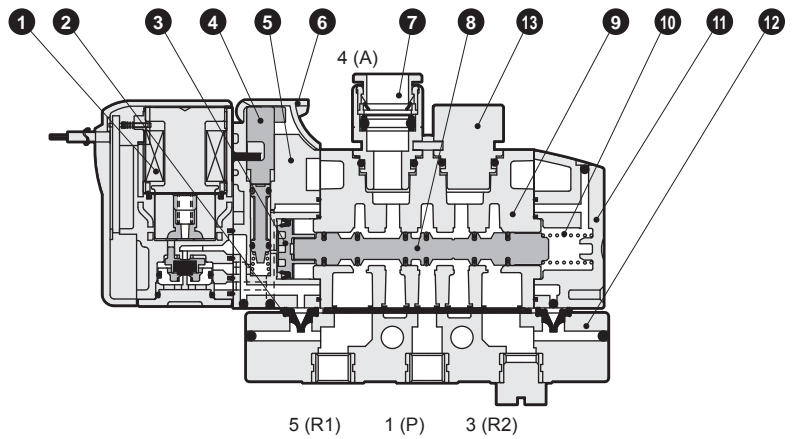
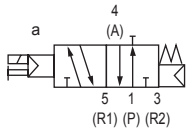
Discrete valve; body piping

Internal structure and parts list

4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

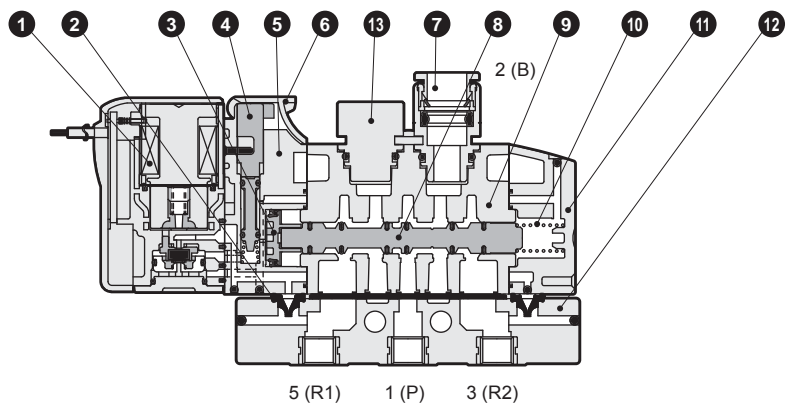
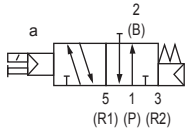
3GD110R

- 2-position single: Normally closed
- Grommet lead wire (blank)



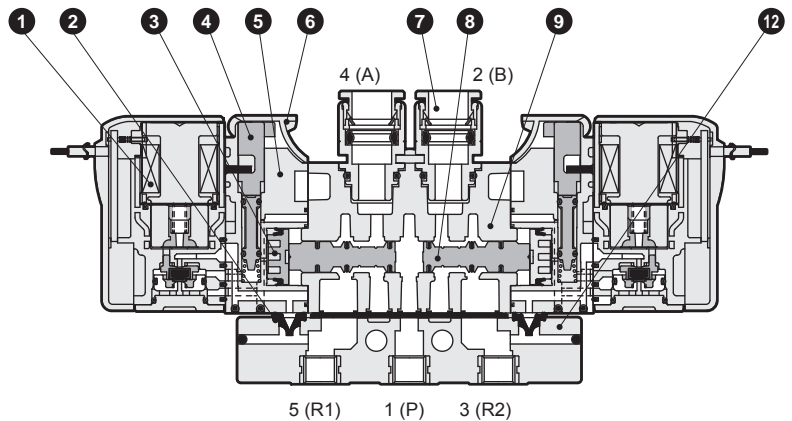
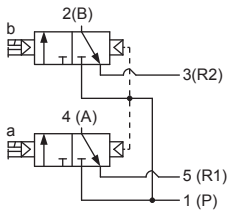
3GD1110R

- 2-position single: Normally closed
- Grommet lead wire (blank)



3GD1660R

- Dual 3 port valve integrated type
- Grommet lead wire (blank)
- A side valve: Normally closed,
- B side valve: Normally closed



Main parts list

No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR
3	Piston D assembly	-
4	Manual operating device	Plastic
5	Piston room	Plastic
6	Manual protection cover	Plastic
7	Cartridge type push-in fitting	-
8	Spool assembly	-
9	Body	Aluminum alloy die-casting
10	Spool spring	Stainless steel
11	Cap	Plastic
12	Piping adapter	Plastic
13	Plug cartridge	Aluminum

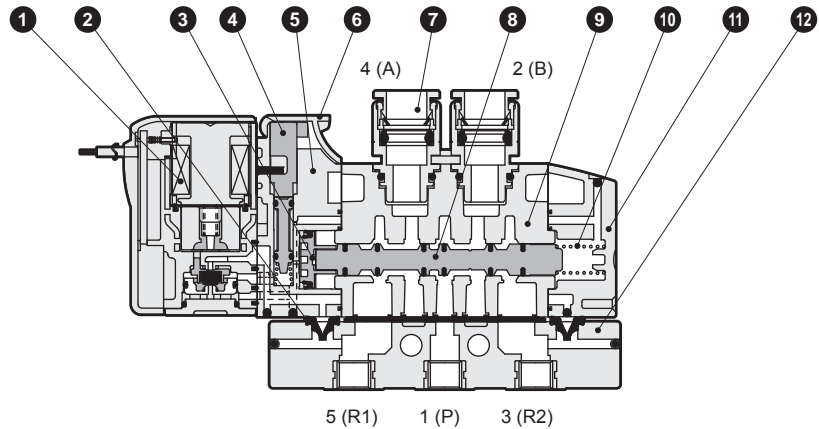
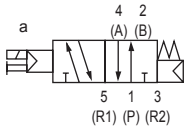
Parts list

No.	Parts name	Model no.	
1	Coil assembly	4GR- ^{Electrical connections} - * -COIL- <u>Voltage</u> Blank: Standard A: Ozone specifications Blank: Grommet lead wire	
7	Cartridge type push-in fitting and related parts	φ4 straight type	4G1R-JOINT-C4
		φ6 straight type	4G1R-JOINT-C6
		Plug cartridge	4G1R-JOINT-CPG

Internal structure and parts list

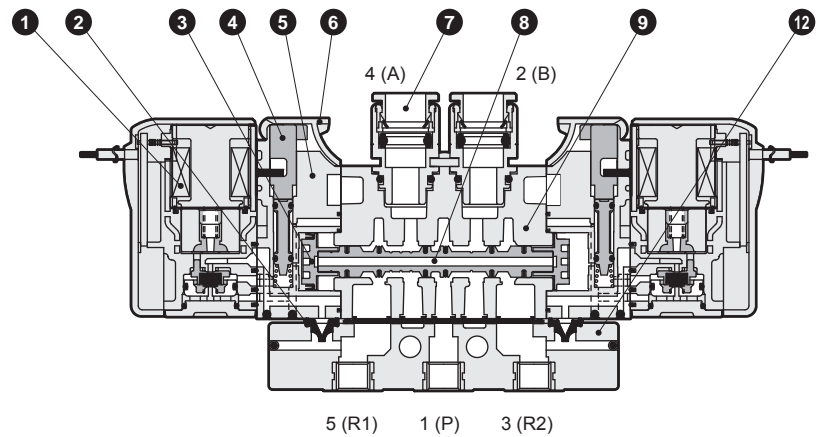
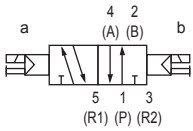
4GD110R

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



4GD120R

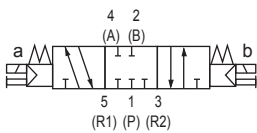
- 2-position double
- Grommet lead wire (blank)



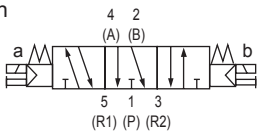
4GD1³/₄/₅0R

- 3-position
- Grommet lead wire (blank)

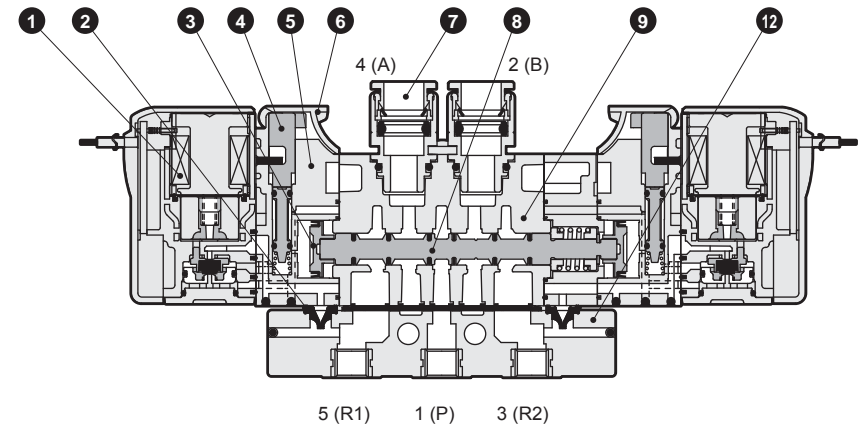
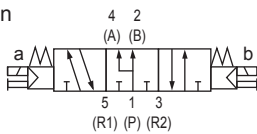
All ports closed



A/B/R connection



P/A/B Connection



Main parts list

No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR
3	Piston D assembly	-
4	Manual operating device	Plastic
5	Piston room	Plastic
6	Manual protection cover	Plastic
7	Cartridge type push-in fitting	-
8	Spool assembly	-
9	Body	Aluminum alloy die-casting
10	Spool spring	Stainless steel
11	Cap	Plastic
12	Piping adapter	Plastic

Parts list

No.	Parts name	Model no.
1	Coil assembly	4GR- ^{Electrical connections} - * -COIL-[Voltage]
		Blank: Standard A: Ozone specifications Blank: Grommet lead wire
7	Cartridge type push-in fitting and related parts	φ4 straight type 4G1R-JOINT-C4
		φ6 straight type 4G1R-JOINT-C6
		Plug cartridge 4G1R-JOINT-CPG

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety precautions

Manifold Specifications

3GD2/3 Series

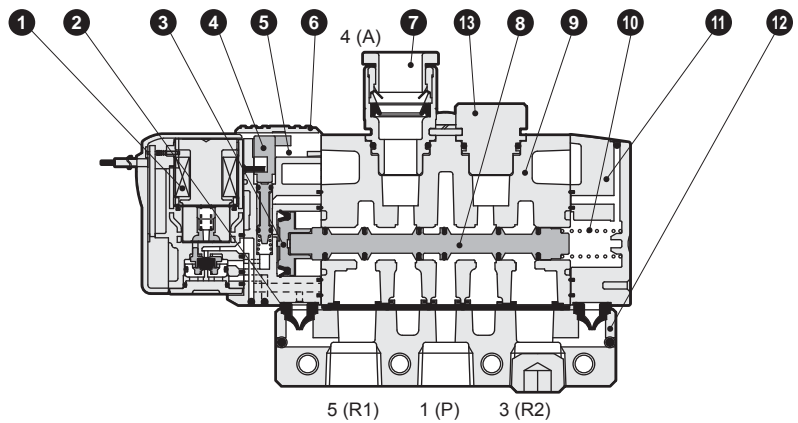
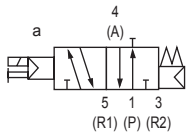
Discrete valve; body piping

Internal structure and parts list

4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

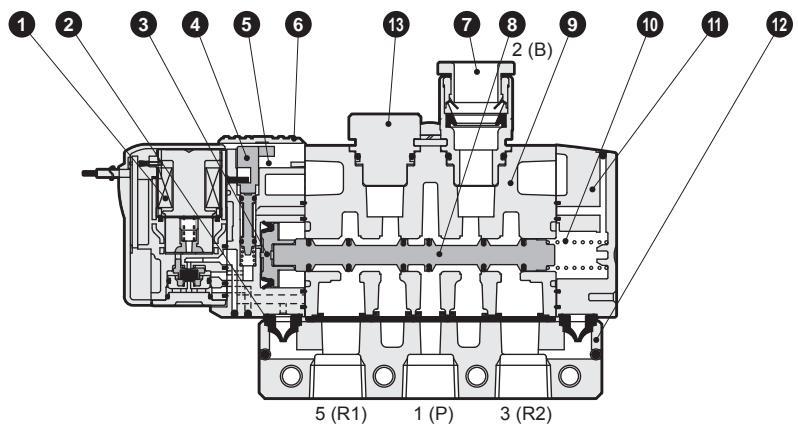
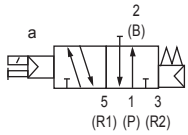
3GD210R/3GD310R

- 2-position single: Normally closed
- Grommet lead wire (blank)



3GD2110R/3GD3110R

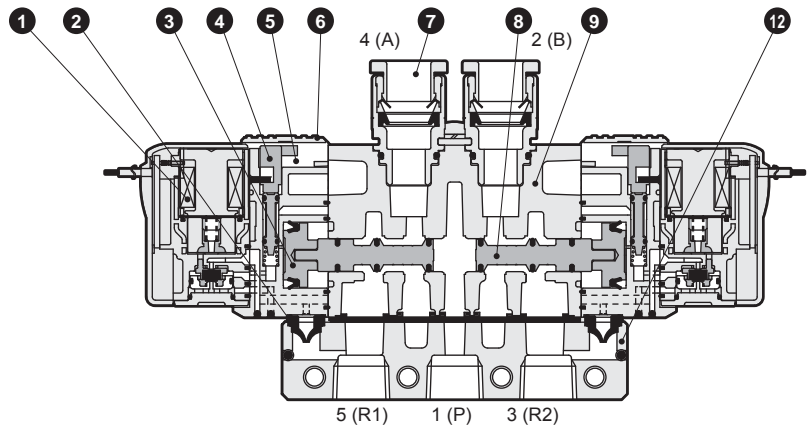
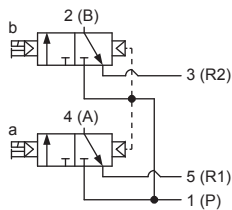
- 2-position single: Normally closed
- Grommet lead wire (blank)



3GD2660R

- Dual 3 port valve integrated type
- Grommet lead wire (blank)

A side valve: Normally closed,
B side valve: Normally closed



Main parts list

No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR
3	Piston assembly	-
4	Manual operating device	Plastic
5	Piston room	Plastic
6	Manual protection cover	Plastic
7	Cartridge type push-in fitting	-
8	Spool assembly	-
9	Body	Aluminum alloy die-casting
10	Spool spring	Stainless steel
11	Cap	Plastic
12	Piping adapter	Aluminum alloy die-casting
13	Plug cartridge	Aluminum

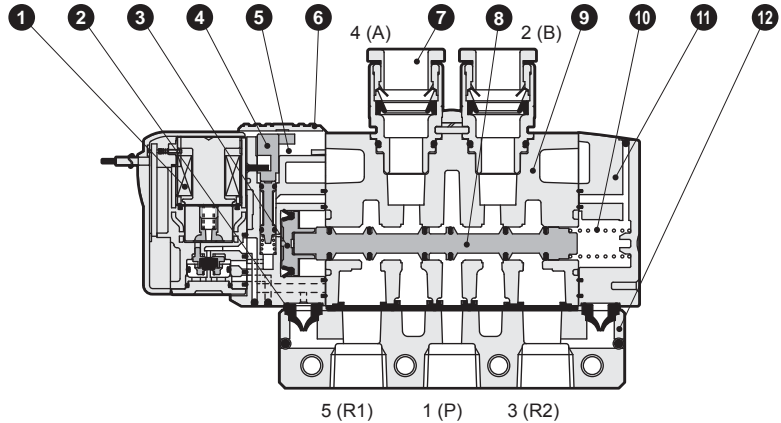
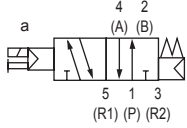
Parts list

No.	Parts name	Model no.		
1	Coil assembly	4GR- ^{Electrical connections} - * -COIL- <u>Voltage</u> Blank: Standard A: Ozone specifications Blank: Grommet lead wire		
7	Cartridge type push-in fitting and related parts	3G2	φ4 straight type	4G2R-JOINT-C4
			φ6 straight type	4G2R-JOINT-C6
		3G3	φ8 straight type	4G2R-JOINT-C8
			Plug cartridge	4G2R-JOINT-CPG
7	Cartridge type push-in fitting and related parts	3G2	φ6 straight type	4G3R-JOINT-C6
			φ8 straight type	4G3R-JOINT-C8
		3G3	φ10 straight type	4G3R-JOINT-C10
			Plug cartridge	4G3R-JOINT-CPG

Internal structure and parts list

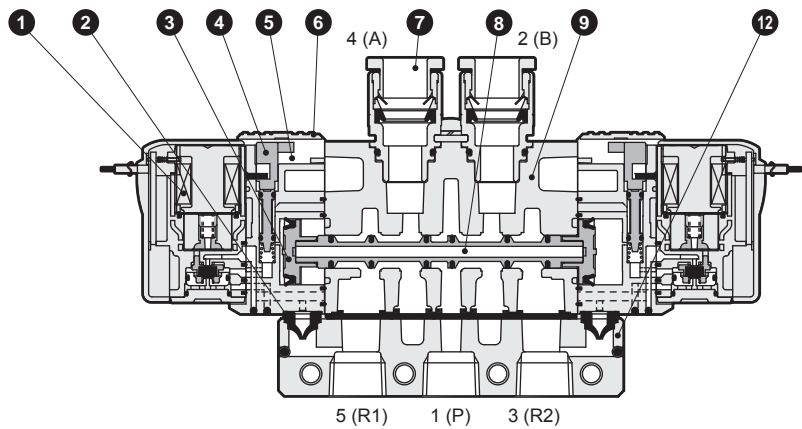
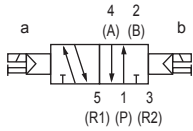
4GD210R & 4GD310R

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



4GD220R & 4GD320R

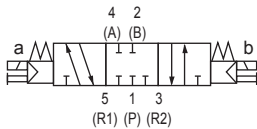
- 2-position double
- Grommet lead wire (blank)



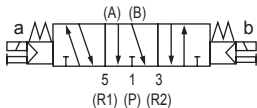
4GD2³/₄0R & 4GD3³/₄0R

- 3-position
- Grommet lead wire (blank)

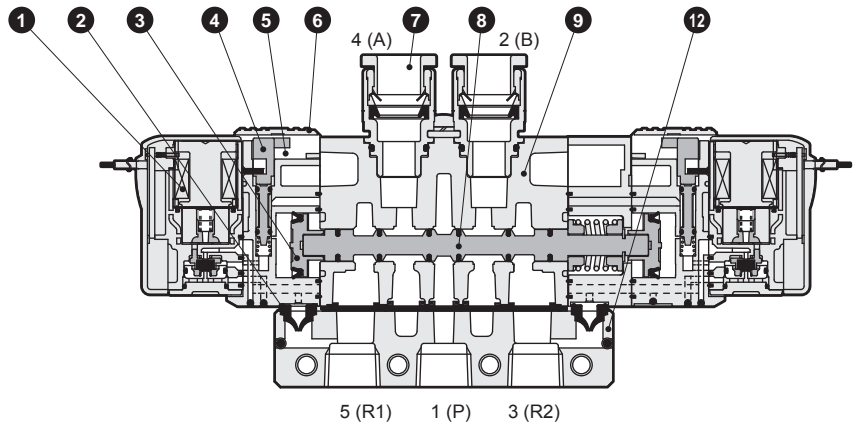
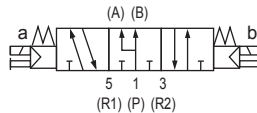
All ports closed



A/B/R connection



P/A/B Connection



Main parts list

No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR
3	Piston D assembly	-
4	Manual operating device	Plastic
5	Piston room	Plastic
6	Manual protection cover	Plastic
7	Cartridge type push-in fitting	-
8	Spool assembly	-
9	Body	Aluminum alloy die-casting
10	Spool spring	Stainless steel
11	Cap	Plastic
12	Piping adapter	Aluminum alloy die-casting

Parts list

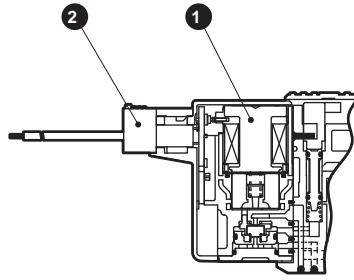
No.	Parts name	Model no.																		
1	Coil assembly	4GR- ^{Electrical connections} - * -COIL- ^{Voltage}																		
		Blank: Standard A: Ozone specifications Blank: Grommet lead wire																		
7	Cartridge type push-in fitting and related parts	<table border="1"> <tr> <td>4G2</td> <td>φ4 straight type</td> <td>4G2R-JOINT-C4</td> </tr> <tr> <td></td> <td>φ6 straight type</td> <td>4G2R-JOINT-C6</td> </tr> <tr> <td></td> <td>φ8 straight type</td> <td>4G2R-JOINT-C8</td> </tr> <tr> <td>4G3</td> <td>φ6 straight type</td> <td>4G3R-JOINT-C6</td> </tr> <tr> <td></td> <td>φ8 straight type</td> <td>4G3R-JOINT-C8</td> </tr> <tr> <td></td> <td>φ10 straight type</td> <td>4G3R-JOINT-C10</td> </tr> </table>	4G2	φ4 straight type	4G2R-JOINT-C4		φ6 straight type	4G2R-JOINT-C6		φ8 straight type	4G2R-JOINT-C8	4G3	φ6 straight type	4G3R-JOINT-C6		φ8 straight type	4G3R-JOINT-C8		φ10 straight type	4G3R-JOINT-C10
4G2	φ4 straight type	4G2R-JOINT-C4																		
	φ6 straight type	4G2R-JOINT-C6																		
	φ8 straight type	4G2R-JOINT-C8																		
4G3	φ6 straight type	4G3R-JOINT-C6																		
	φ8 straight type	4G3R-JOINT-C8																		
	φ10 straight type	4G3R-JOINT-C10																		

3GD1, 2, 3 & 4GD1, 2, 3 Series

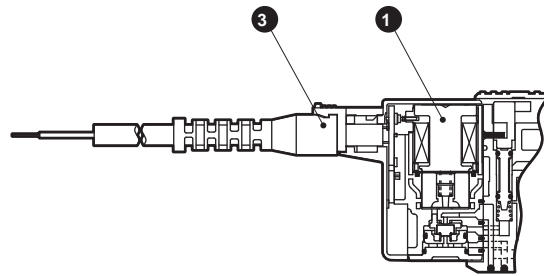
Discrete valve; body piping

Internal structure and parts list (electrical connections section)

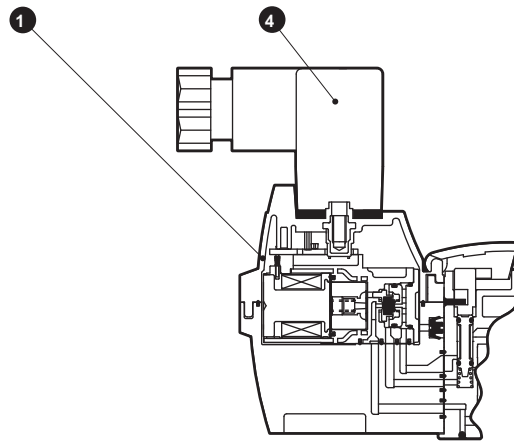
● E type connector type E**



● EJ type connector type E**J



● DIN terminal box type B



Main parts list

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

Parts list

No.	Parts name	Model no.
1	Coil assembly	4GR- Electrical connections - * -COIL- Voltage Blank: Standard A: Ozone specifications E* : E type connector type E*J: Socket with cover type B* : DIN terminal box type B includes the DIN terminal box BN does not include DIN terminal box.
2	E type connector socket assembly	4G-SOCKET-ASSY-E**- Voltage
3	Socket assembly with cover	4GR-SOCKET-ASSY-E**J
4	DIN terminal box assembly	4GR-TERMINAL-BOX- Voltage

4GAB
 M4GAB
 MN4GAB
 4GAB Master valve
 4GD/E
 M4GD/E
 MN4GD/E
 Technical data
 Safety precautions
 Manifold Specifications

MEMO

4GAB	M4GA/B	MN4GA/B	4GAB Master valve	4GD/E	M4GD/E	MN4GD/E	Technical data	Safety precautions	Manifold Specifications
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3GD1 Series

Discrete valve; body piping

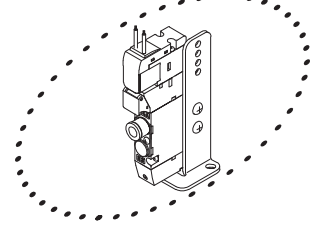
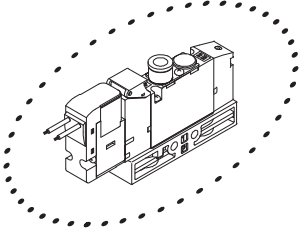
Dimensions



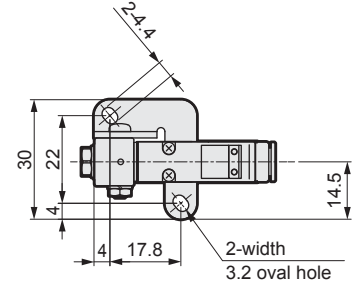
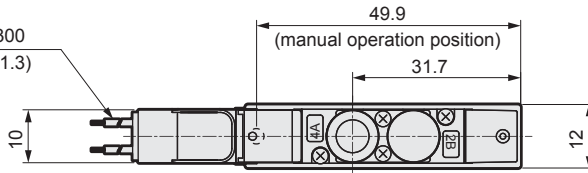
3GD110R

● 2-position single normally closed Grommet lead wire (blank)

● Mounting plate type (P)

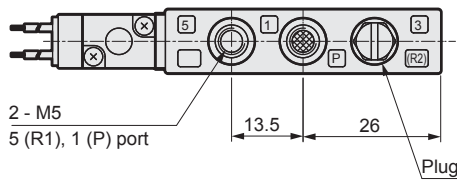
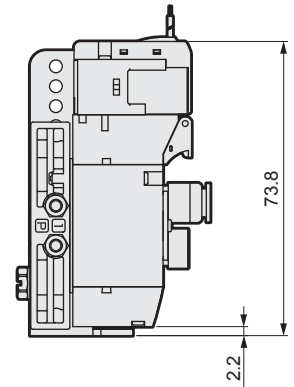
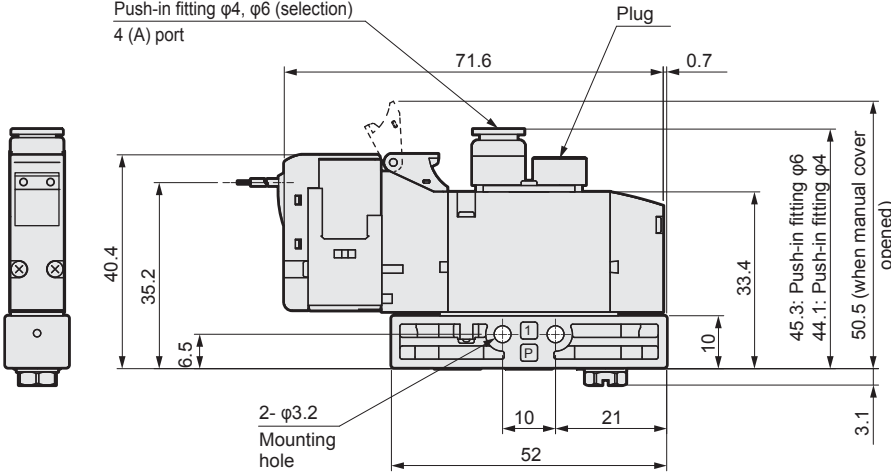


Lead wire length 300
(AWG#26, O.D. ϕ 1.3)

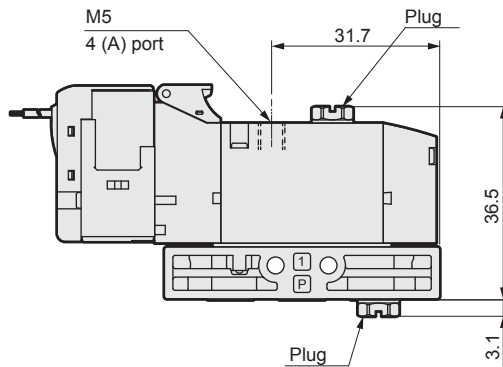
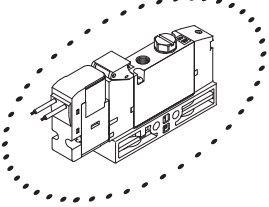


Push-in fitting ϕ 4, ϕ 6 (selection)
4 (A) port

Plug



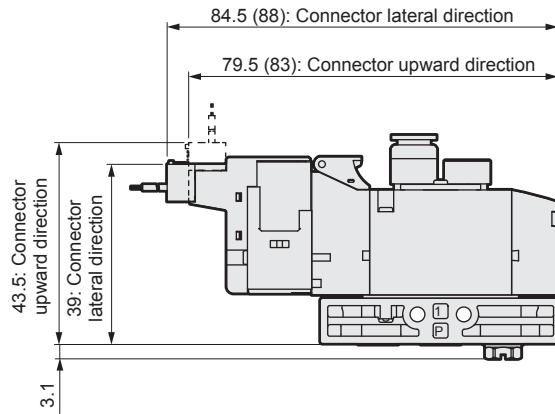
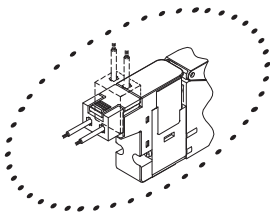
● M5 female thread type (M5)



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

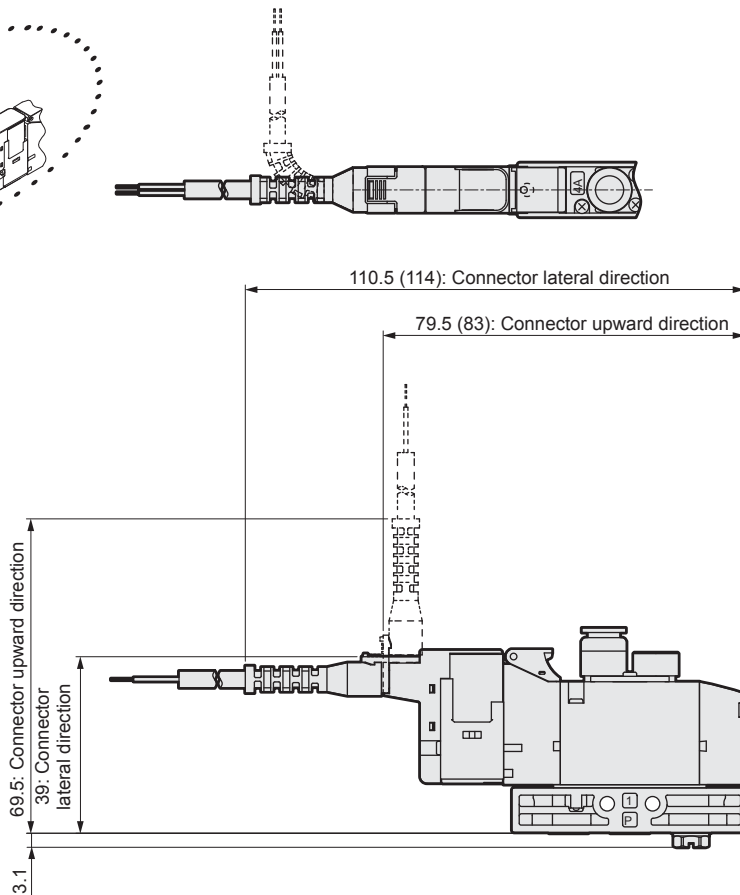
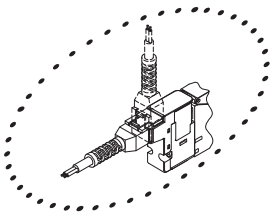
Dimensions

● E type connector type (E)



Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

3GD1 Series

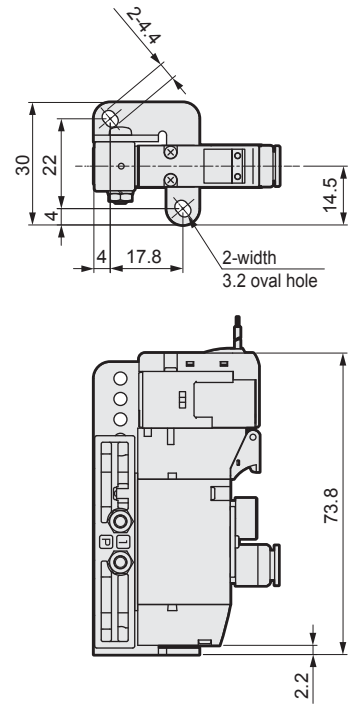
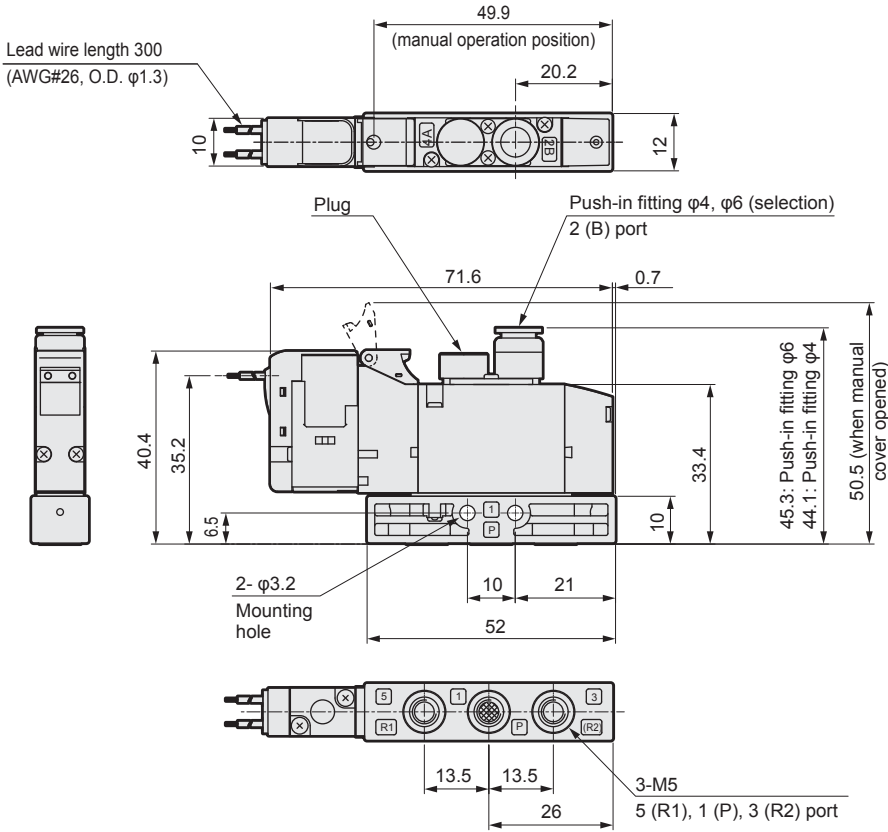
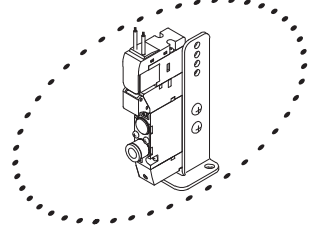
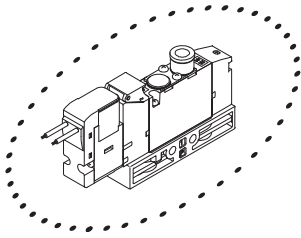
Discrete valve; body piping

Dimensions 

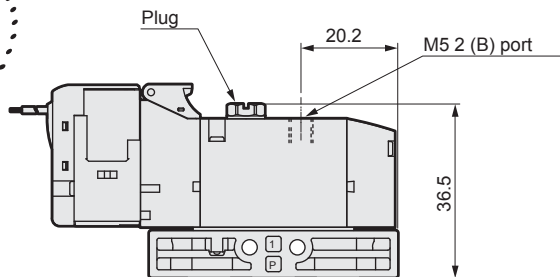
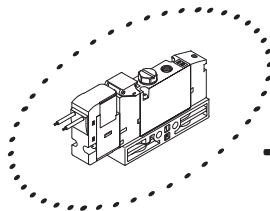
3GD1110R

● 2-position single normally open Grommet lead wire (blank)

● Mounting plate type (P)



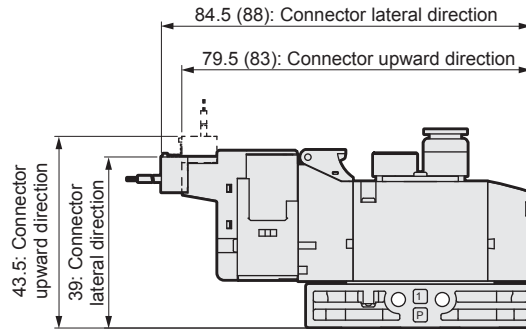
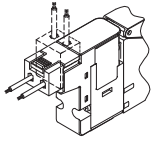
● M5 female thread type (M5)



4GAB
M4GAB
MN4GAB
4GAB
Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety
precautions
Manifold
Specifications

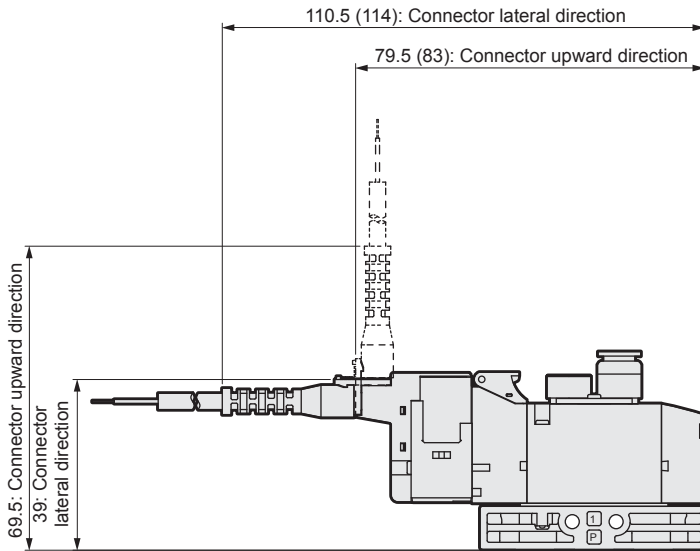
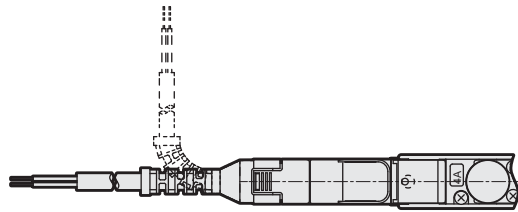
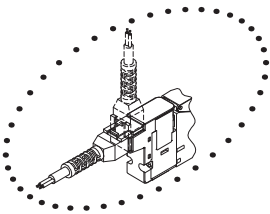
Dimensions

● E type connector type (E)



Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

3GD2 Series

Discrete valve; body piping

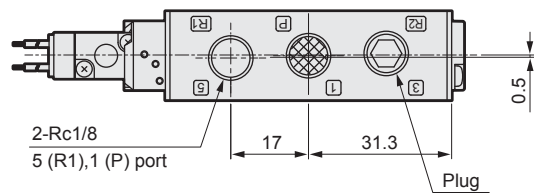
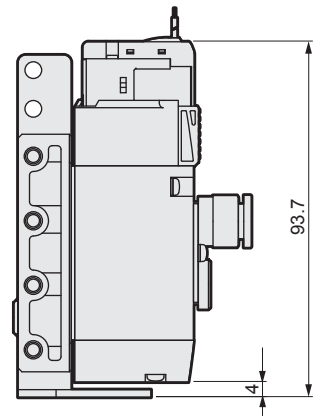
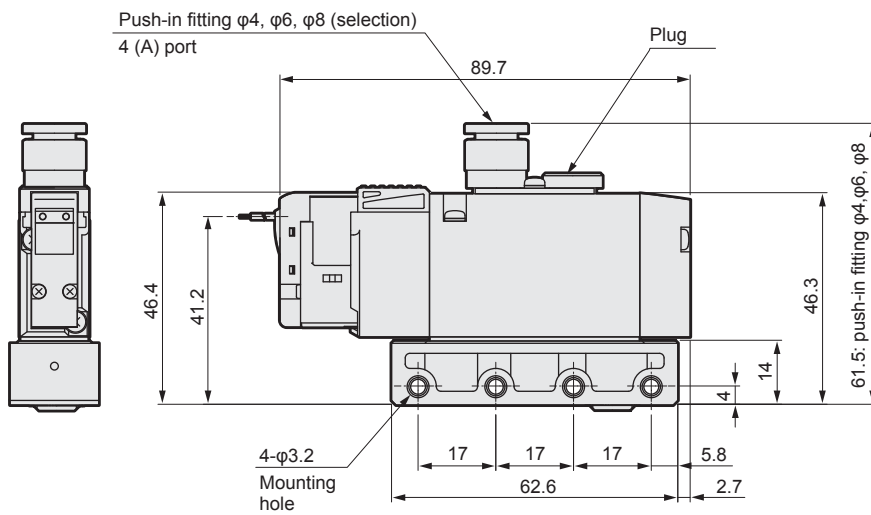
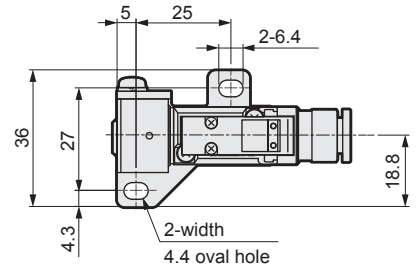
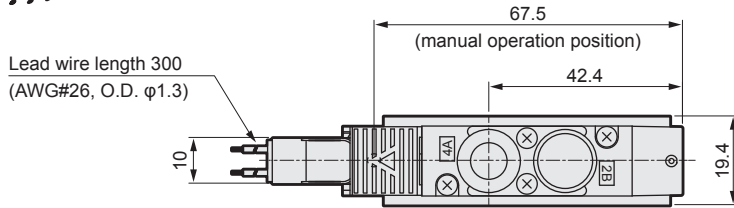
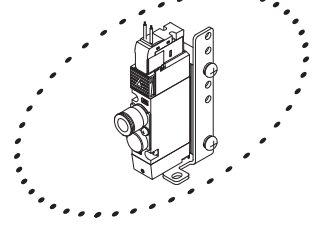
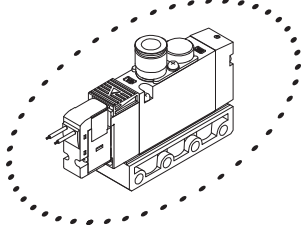
Dimensions



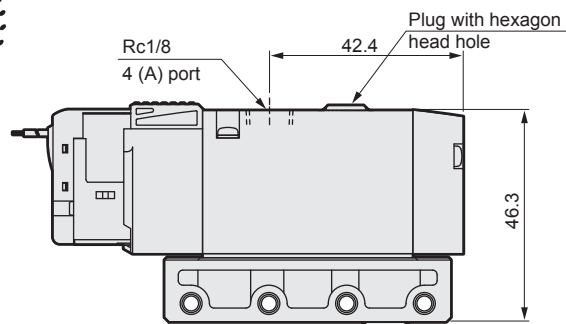
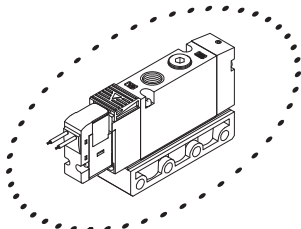
3GD210R

● 2-position single normally closed Grommet lead wire (blank)

● Mounting plate type (P)



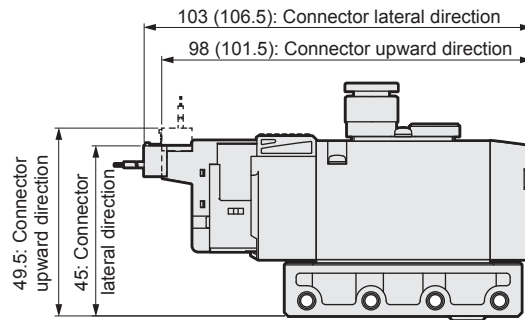
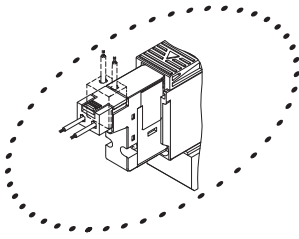
● Rc1/8 female thread type (06)



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

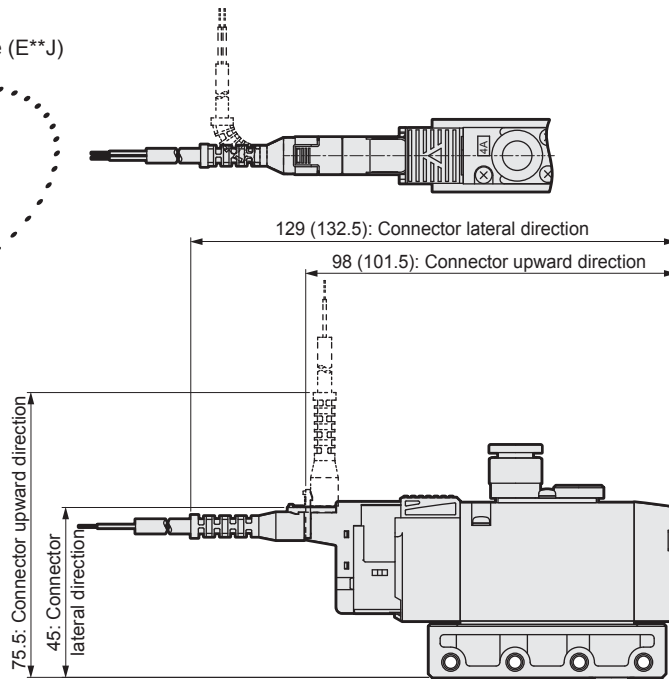
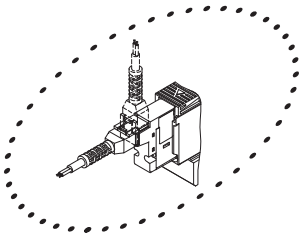
Dimensions

● E type connector type (E)



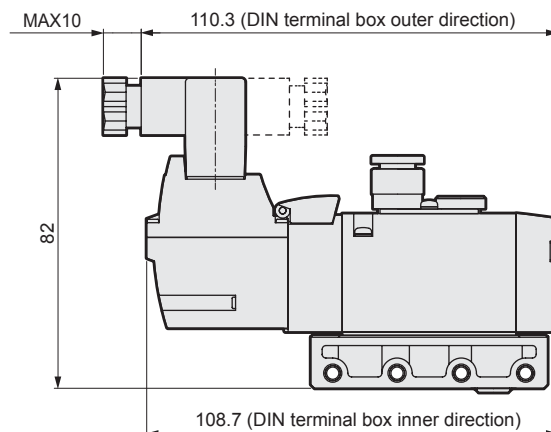
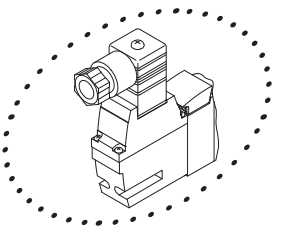
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

3GD2 Series

Discrete valve; body piping

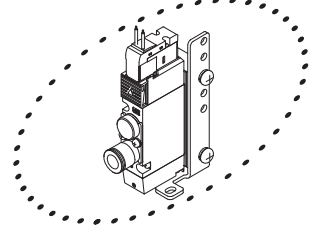
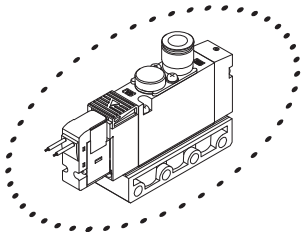
Dimensions



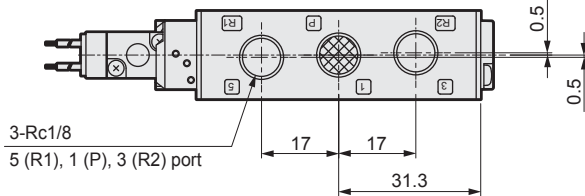
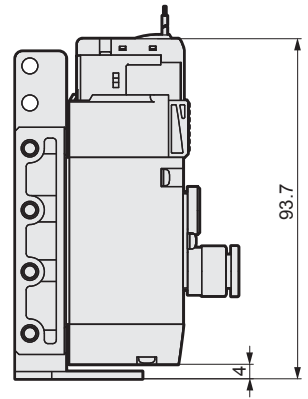
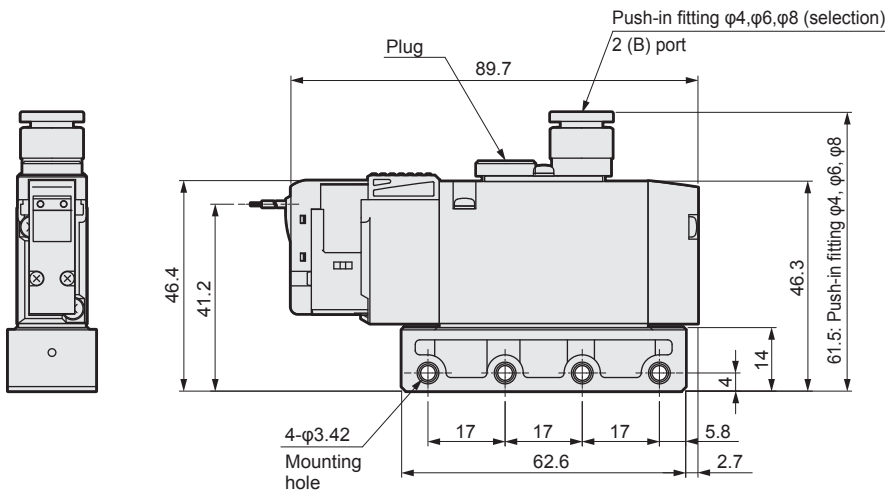
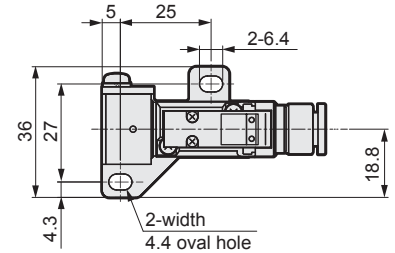
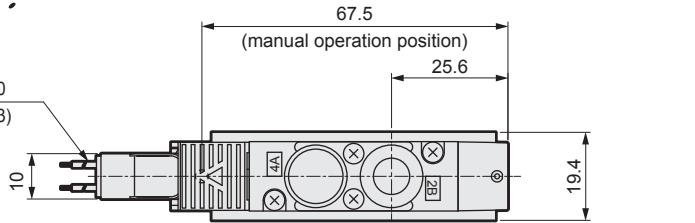
3GD2110R

● 2-position single normally open Grommet lead wire (blank)

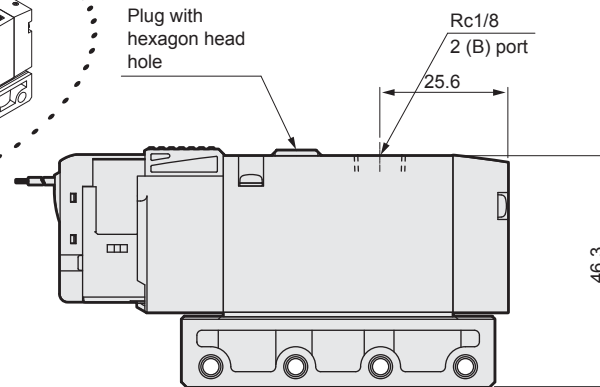
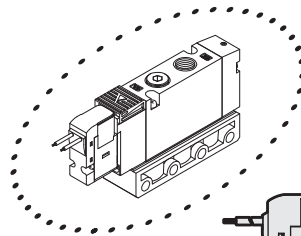
● Mounting plate type (P)



Lead wire length 300
(AWG#26, O.D. ϕ 1.3)

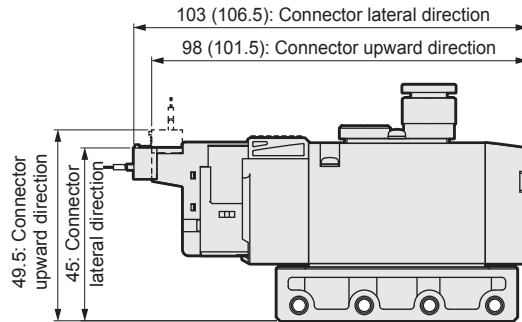
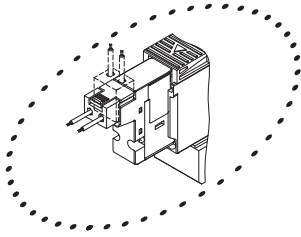


● Rc1/8 female thread type (06)



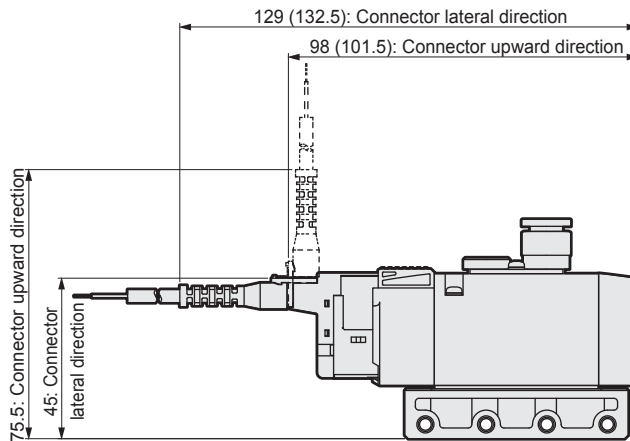
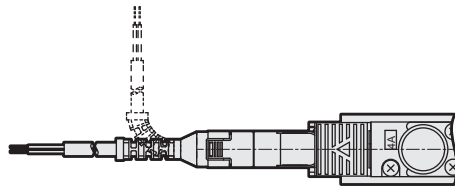
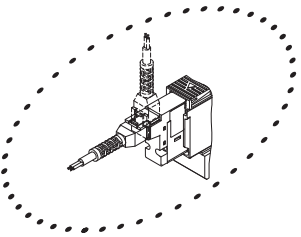
Dimensions

● E type connector type (E)



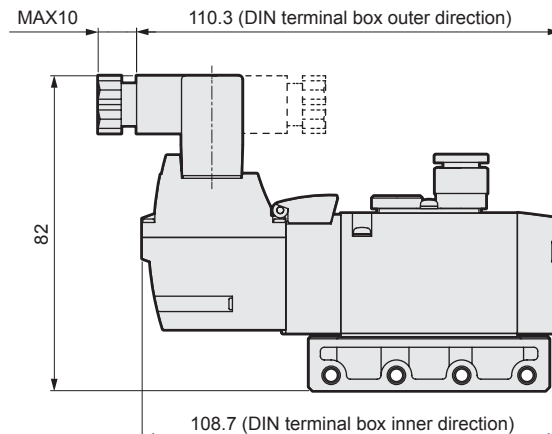
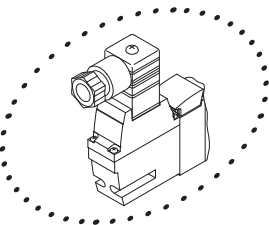
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

3GD3 Series

Discrete valve; body piping

Dimensions

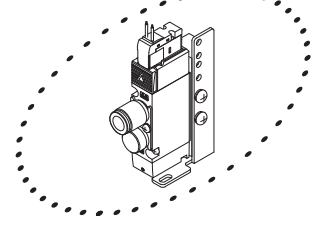
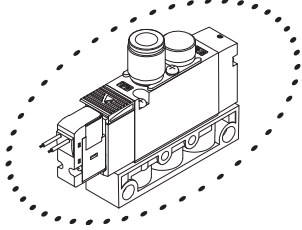


4GAB
M4GAB
MN4GAB
4GAB Master valve
4GDIE
M4GDIE
MN4GDIE
Technical data
Safety precautions
Manifold Specifications

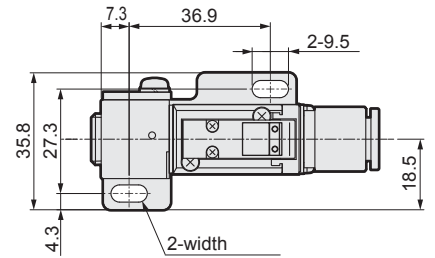
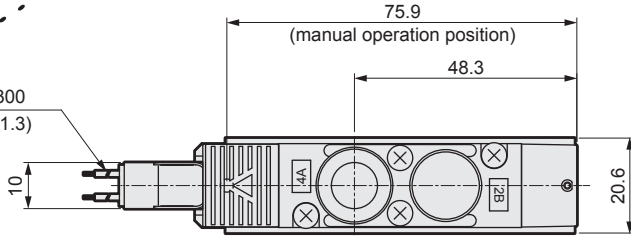
3GD310R

● 2-position single normally closed Grommet lead wire (blank)

● Mounting plate type (P)

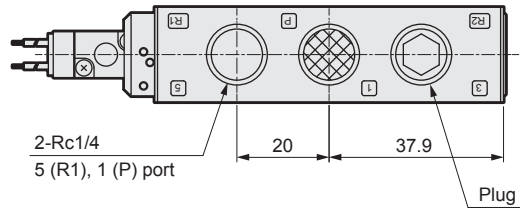
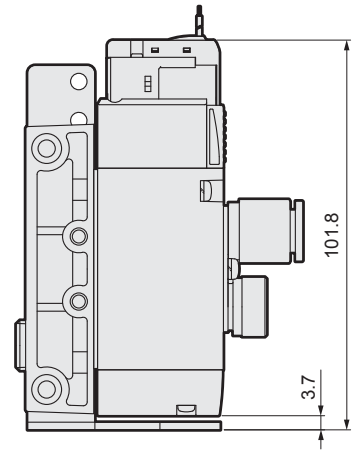
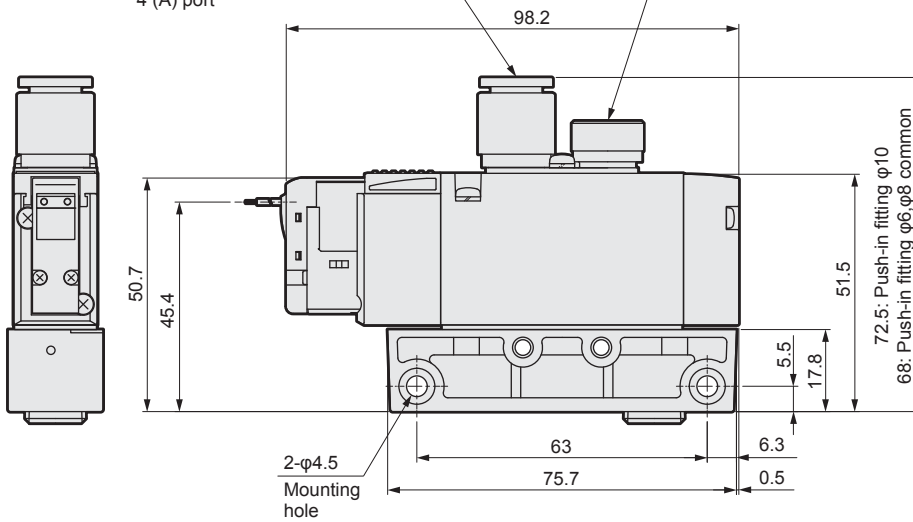


Lead wire length 300
(AWG#26, O.D. ϕ 1.3)

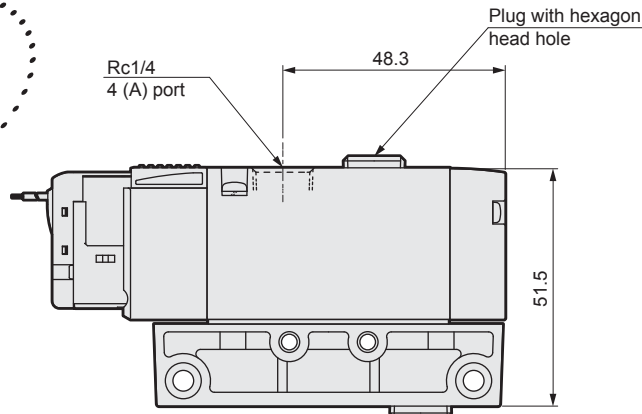
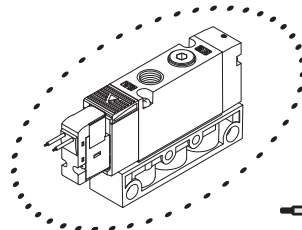


Push-in fitting ϕ 6, ϕ 8, ϕ 10 (selection)
4 (A) port

Plug

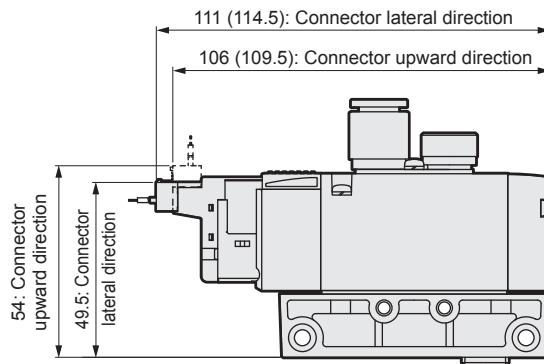
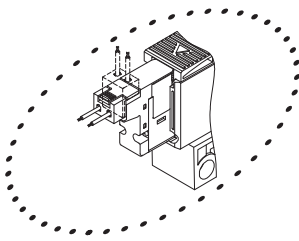


● Rc1/4 female thread type (08)



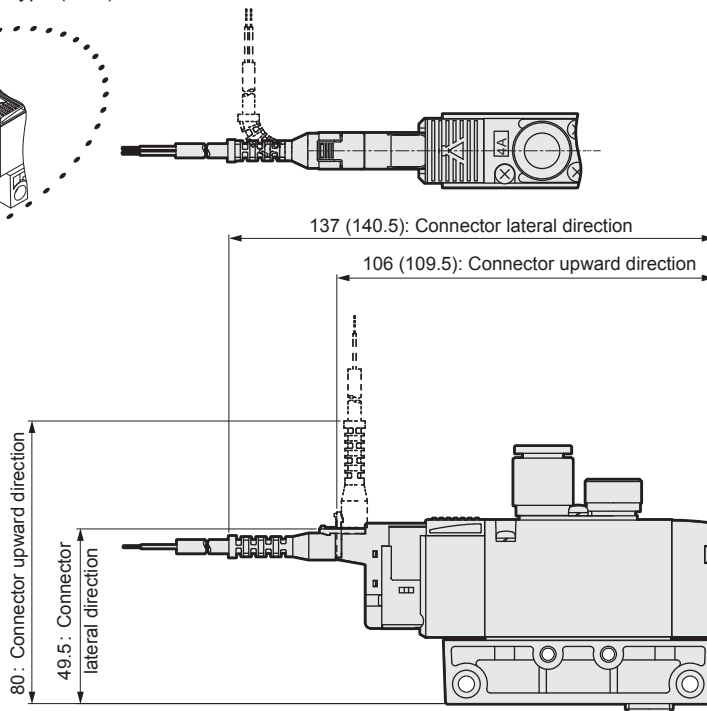
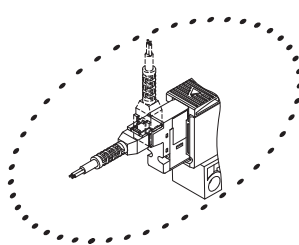
Dimensions

● E type connector type (E)



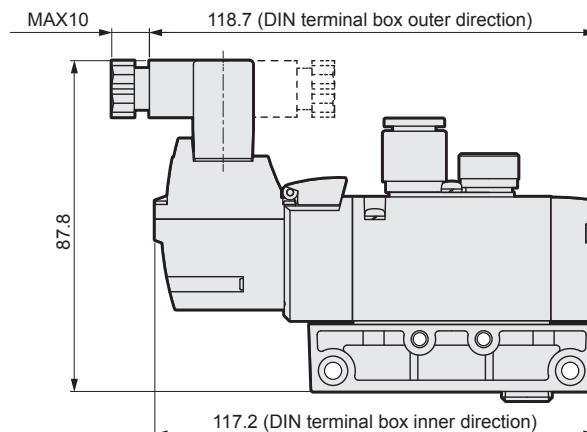
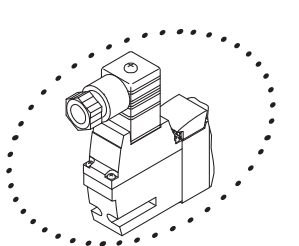
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety precautions

Manifold Specifications

3GD3 Series

Discrete valve; body piping

Dimensions

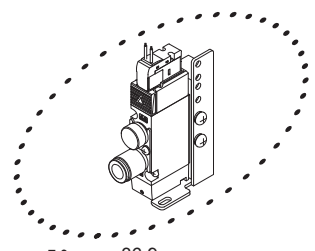
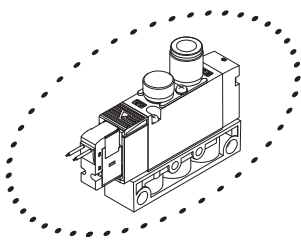


4GAB
M4GAB/B
MN4GAB/B
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

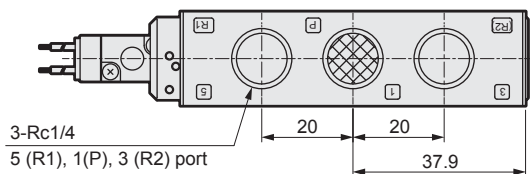
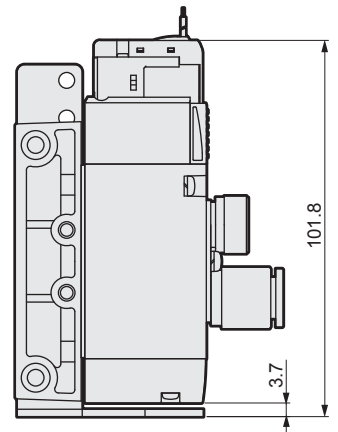
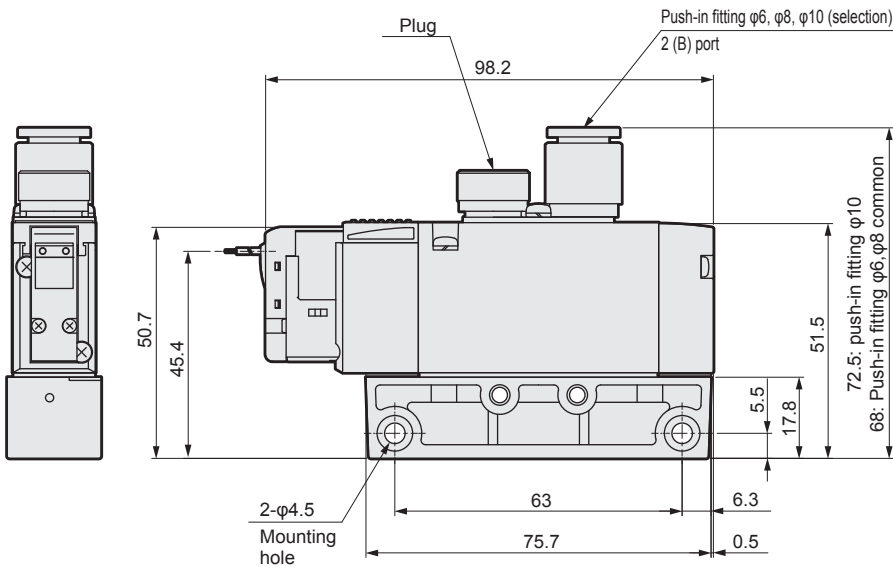
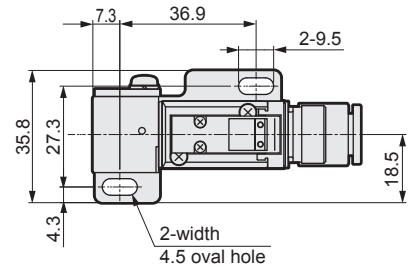
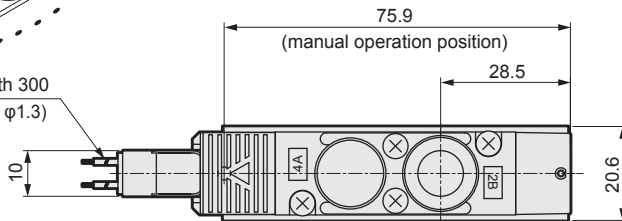
3GD3110R

● 2-position single normally open Grommet lead wire (blank)

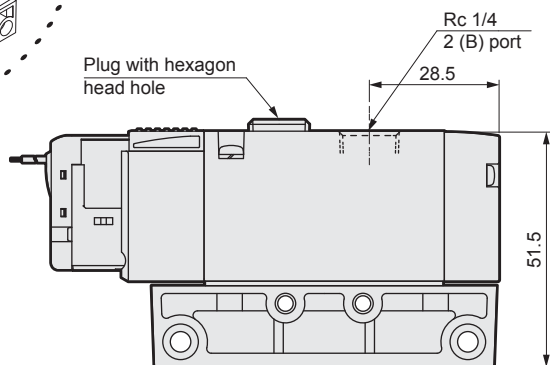
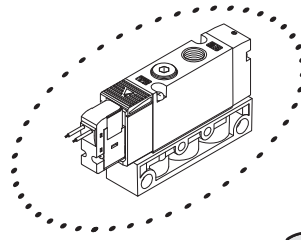
● Mounting plate type (P)



Lead wire length 300
(AWG#26, O.D. ϕ 1.3)

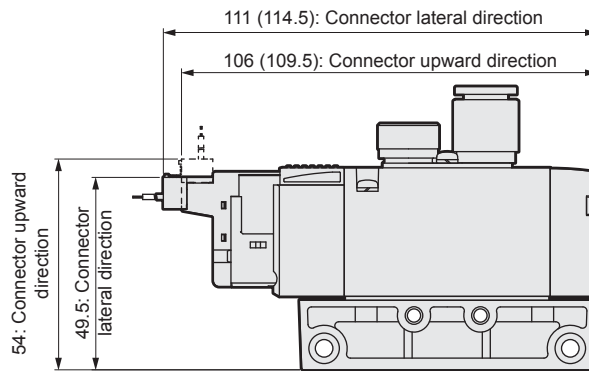
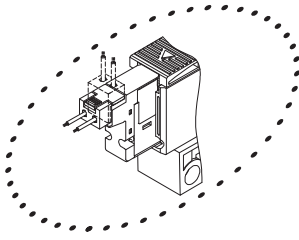


● Rc1/4 female thread type (08)



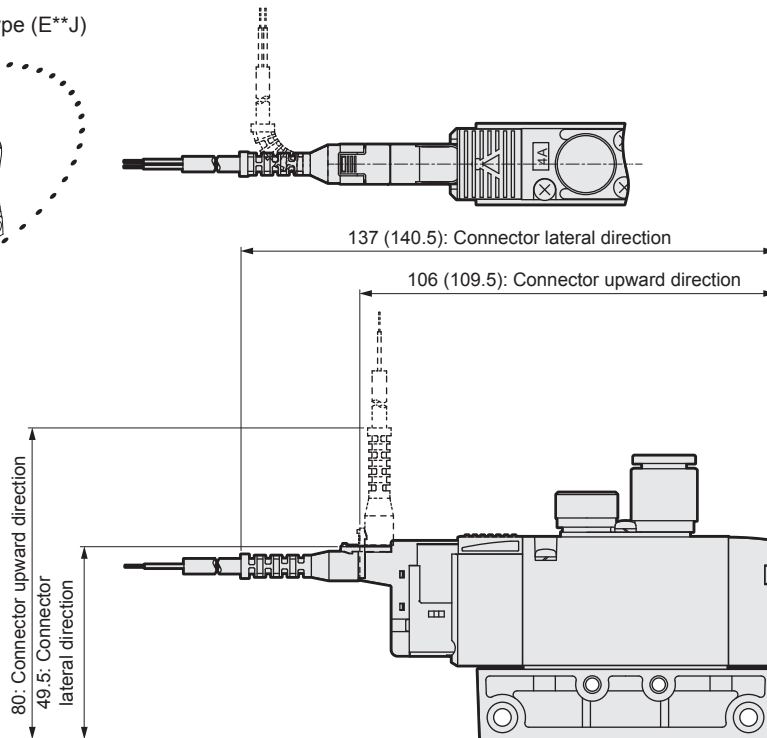
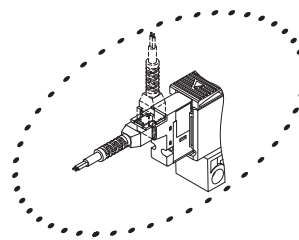
Dimensions

● E type connector type (E)



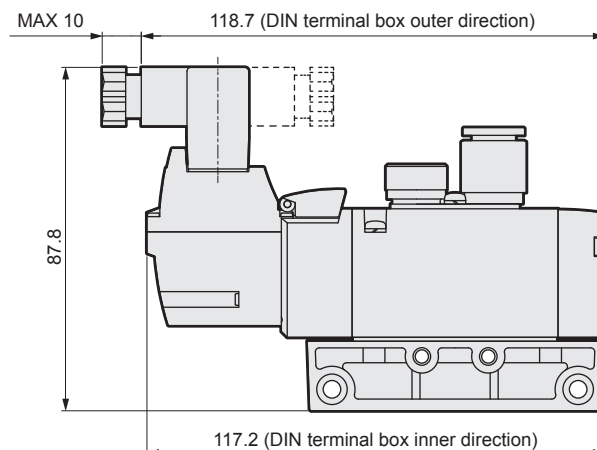
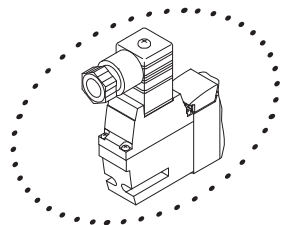
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GD1 Series

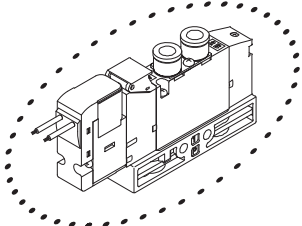
Discrete valve; body piping

Dimensions

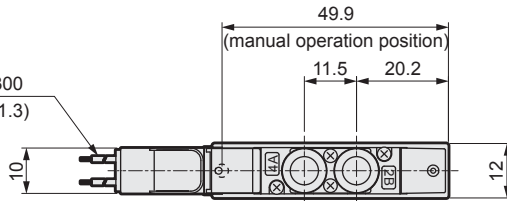


4GD110R

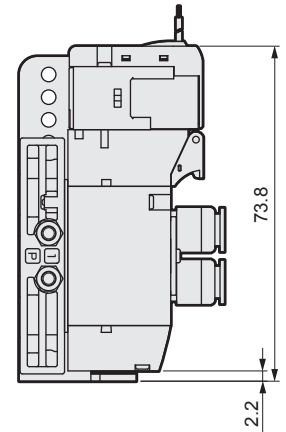
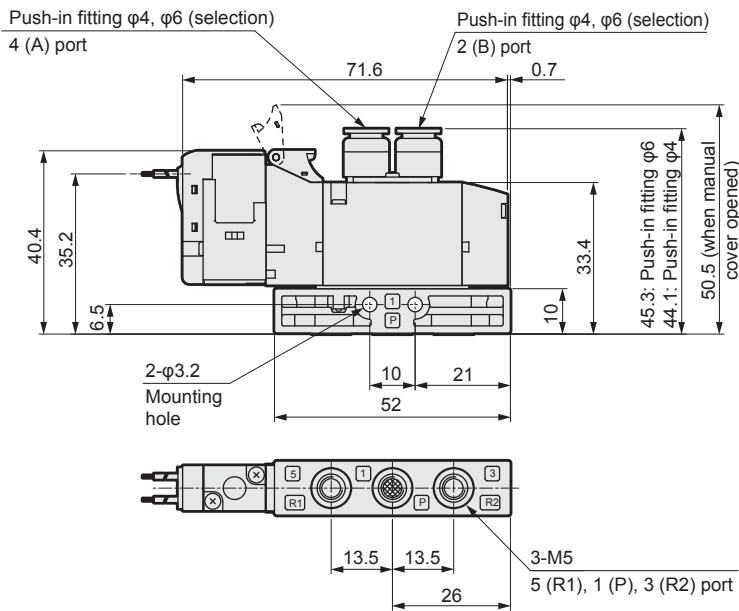
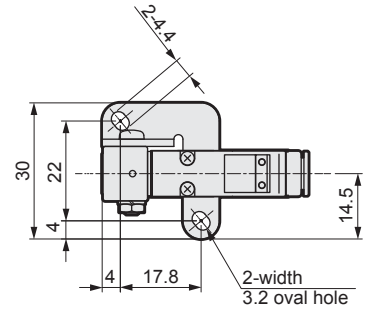
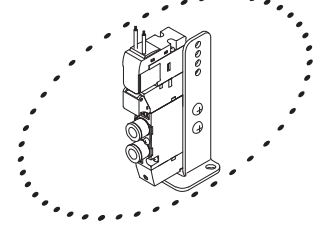
- 2-position single Grommet lead wire (blank)



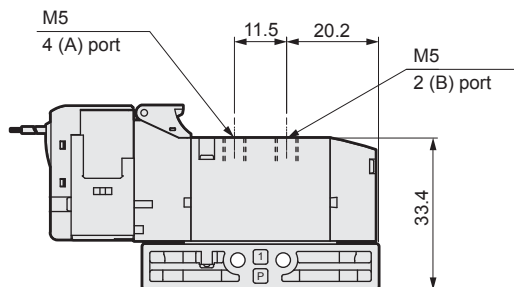
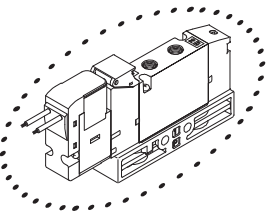
Lead wire length 300
(AWG#26, O.D. $\phi 1.3$)



- Mounting plate type (P)



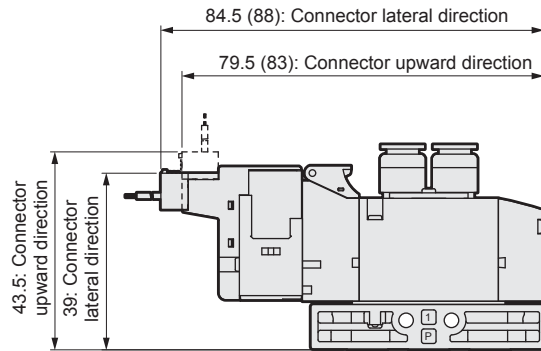
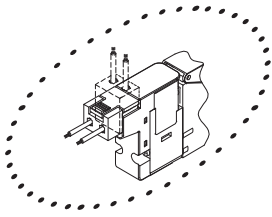
- M5 female thread type (M5)



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

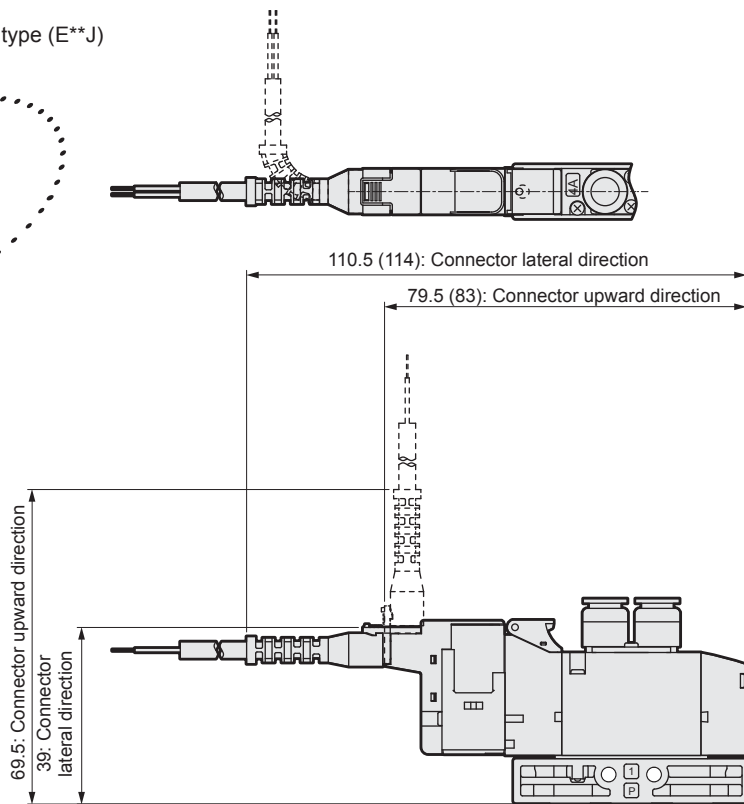
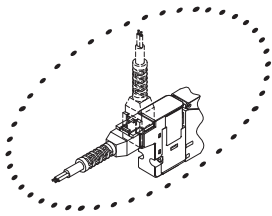
Dimensions

● E type connector type (E)



Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GD1 Series

Discrete valve; body piping

Dimensions



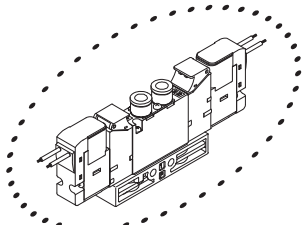
4GD120R

- 2-position double Grommet lead wire (blank)

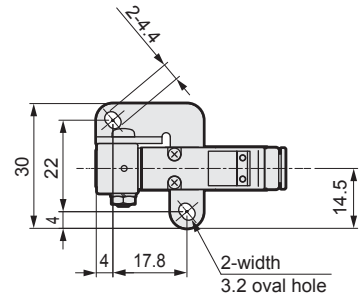
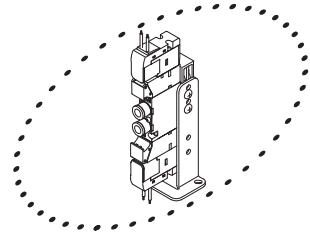
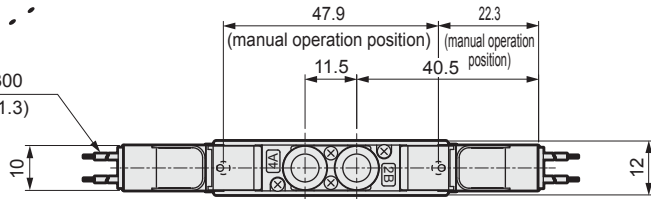
3GD1660R

- Dual 3 port valve integrated type Grommet lead wire (blank)

- Mounting plate type (P)

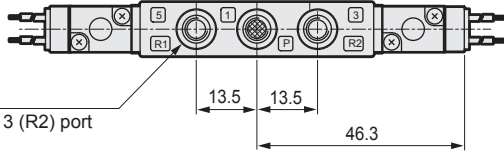
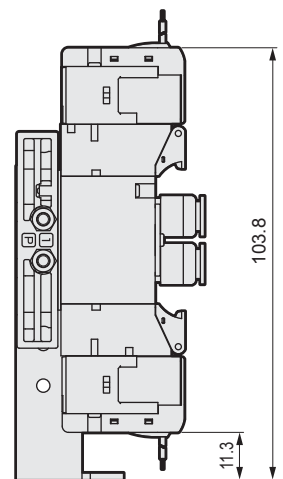
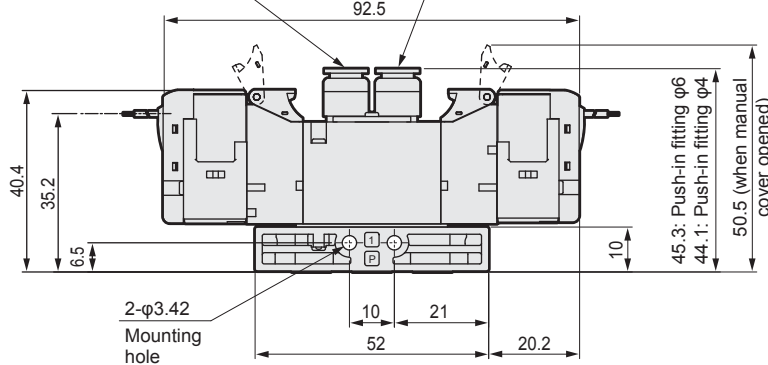


Lead wire length 300
(AWG#26, O.D. ϕ 1.3)



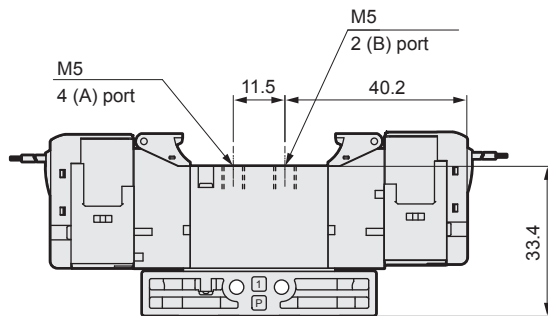
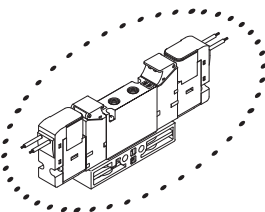
Push-in fitting ϕ 4, ϕ 6 (selection)
4 (A) port

Push-in fitting ϕ 4, ϕ 6 (selection)
2 (B) port



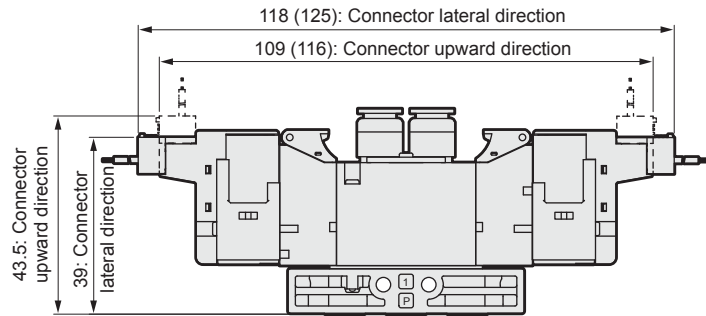
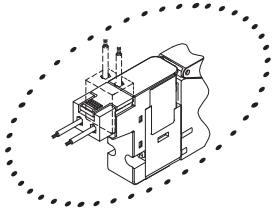
3-M5
5 (R1), 1 (P), 3 (R2) port

- M5 female thread type (M5)



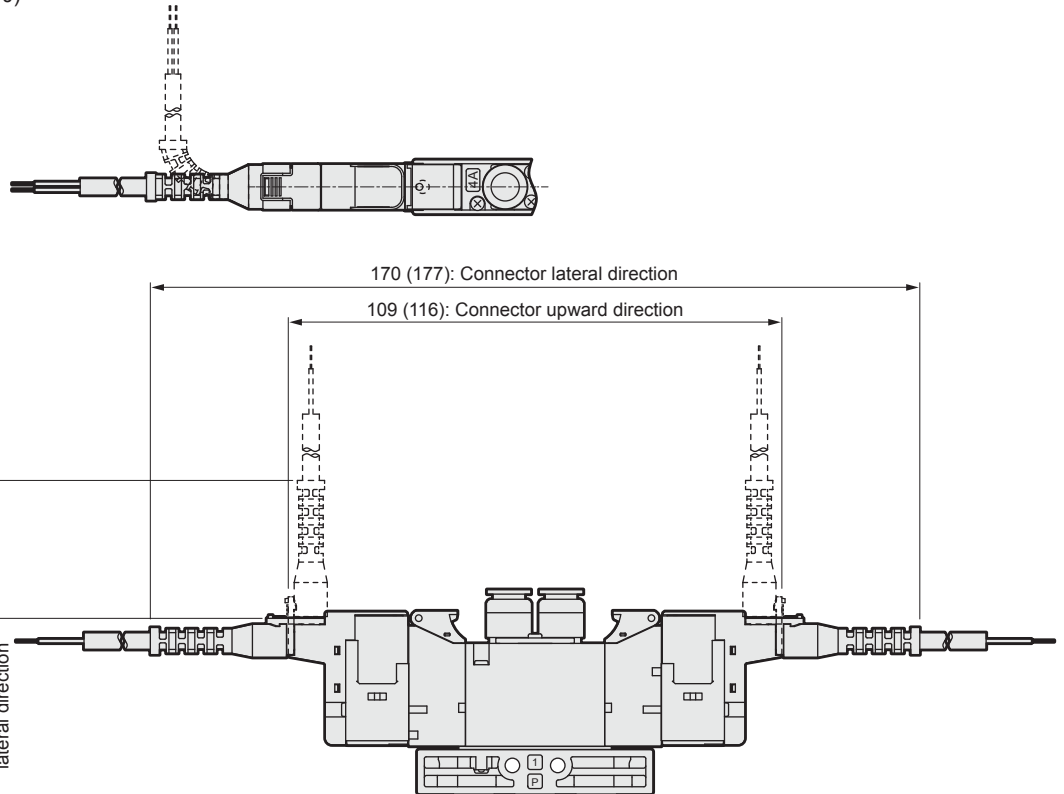
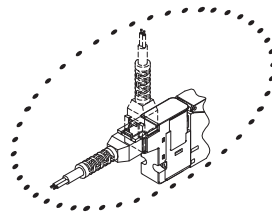
Dimensions

● E type connector type (E)



Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GD1 Series

Discrete valve; body piping

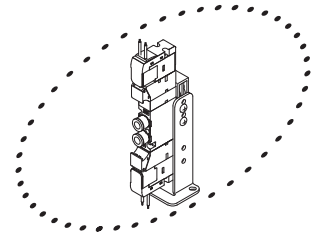
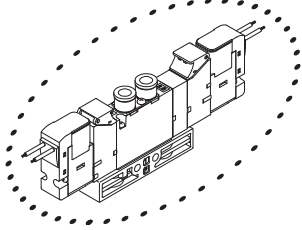
Dimensions



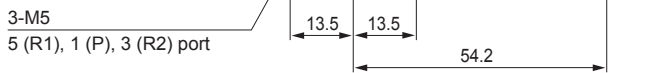
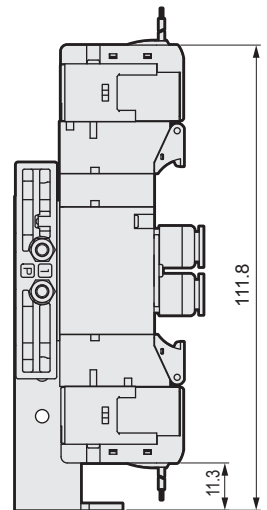
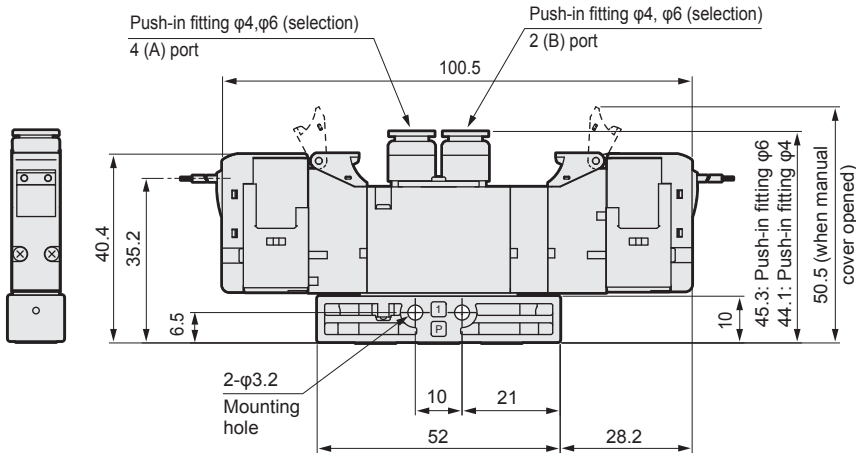
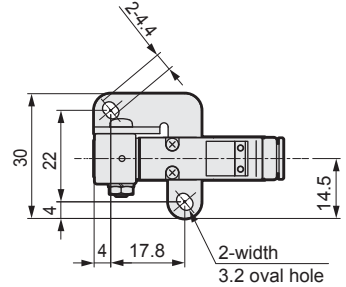
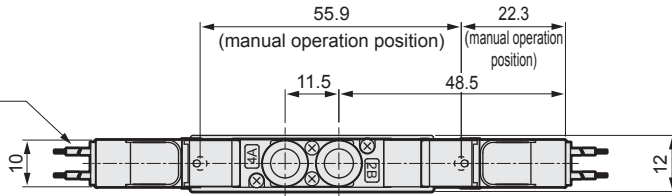
4GD1 0R

● 3 position Grommet lead wire (blank)

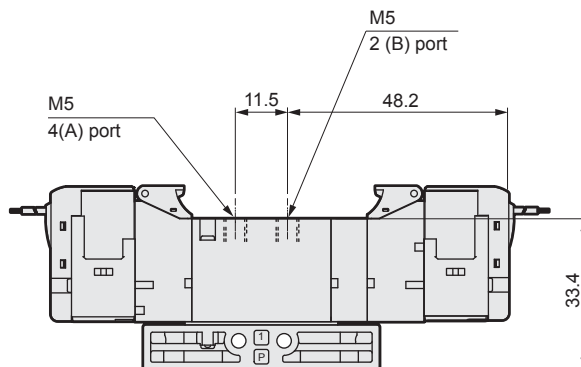
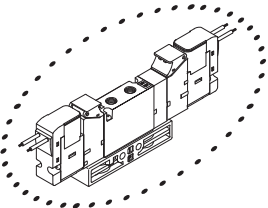
● Mounting plate type (P)



Lead wire length 300
(AWG#26, O.D. ϕ 1.3)



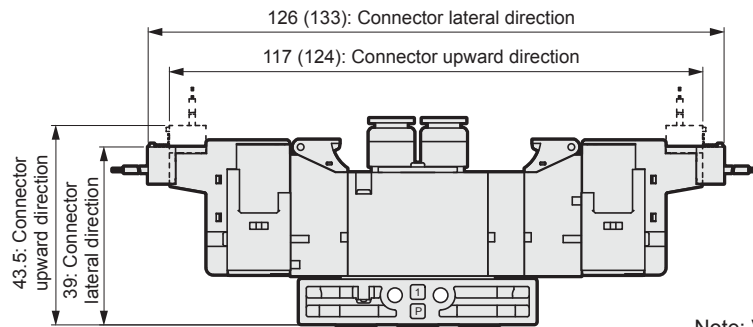
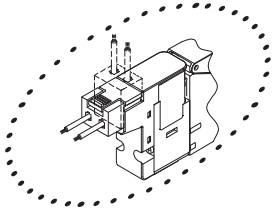
● M5 female thread type (M5)



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

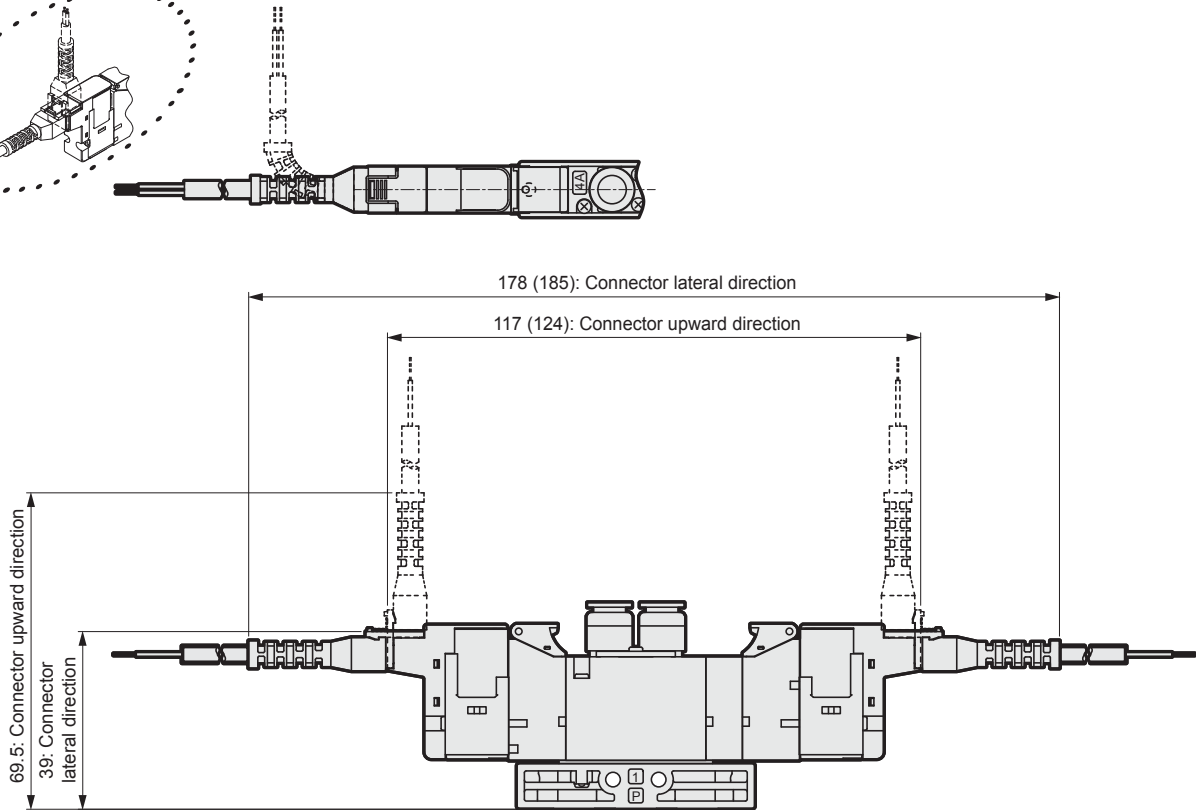
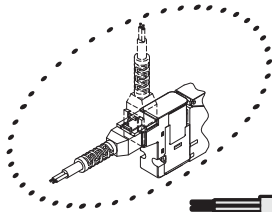
Dimensions

● E type connector type (E)



Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GD2 Series

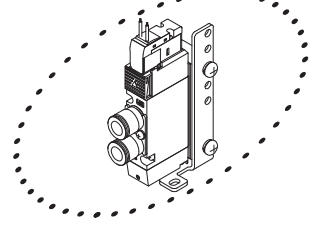
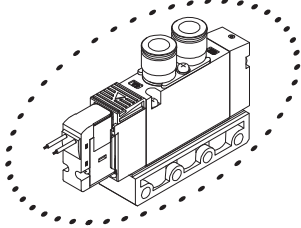
Discrete valve; body piping

Dimensions 

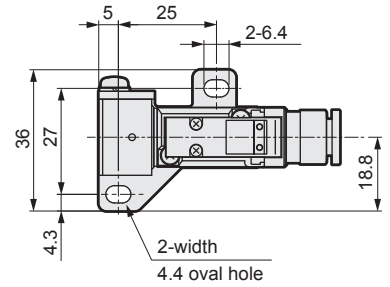
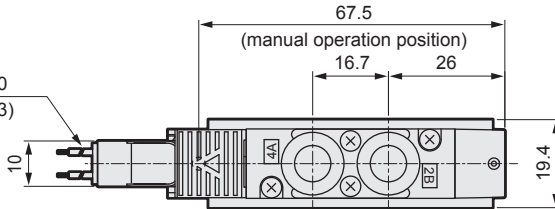
4GD210R

● 2-position single Grommet lead wire (blank)

● Mounting plate type (P)

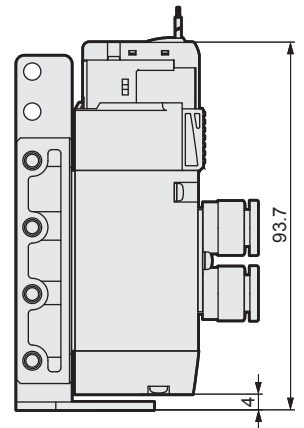
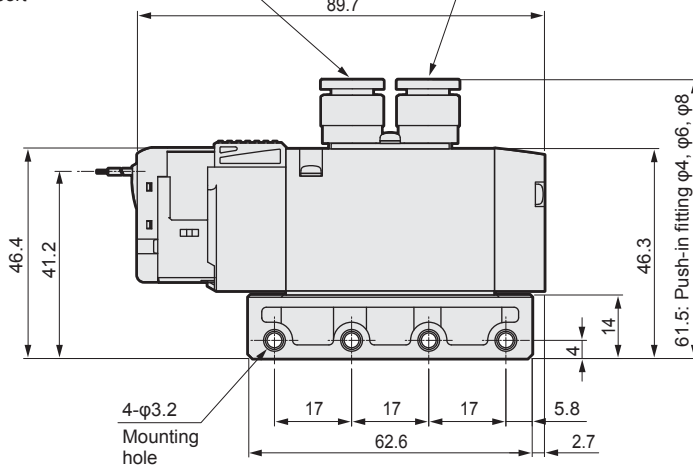
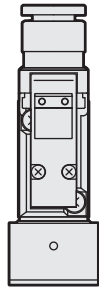


Lead wire length 300
(AWG#26, O.D. ϕ 1.3)

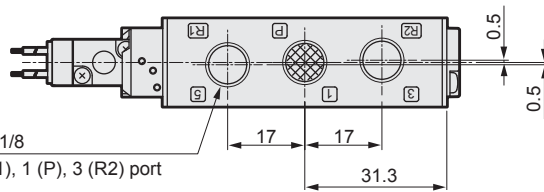


Push-in fitting ϕ 4, ϕ 6, ϕ 8 (selection)
4 (A) port

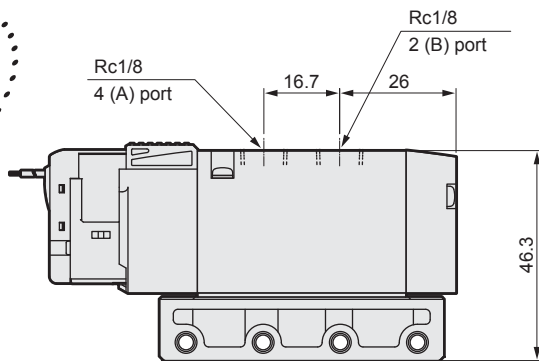
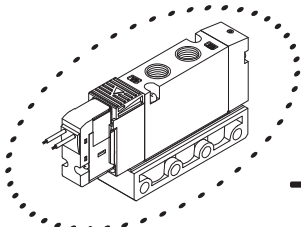
Push-in fitting ϕ 4, ϕ 6, ϕ 8 (selection)
2 (B) port



3-Rc1/8
5 (R1), 1 (P), 3 (R2) port

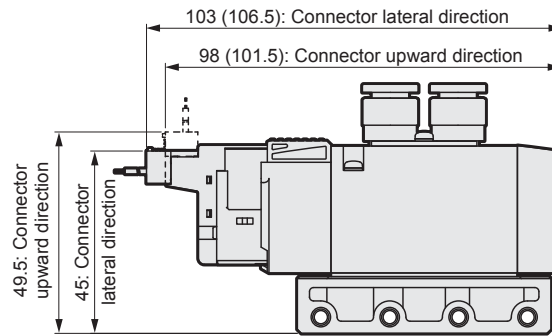
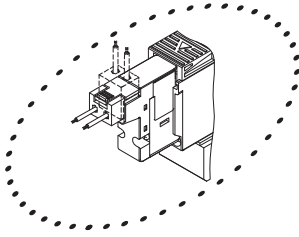


● Rc1/8 female thread type (06)



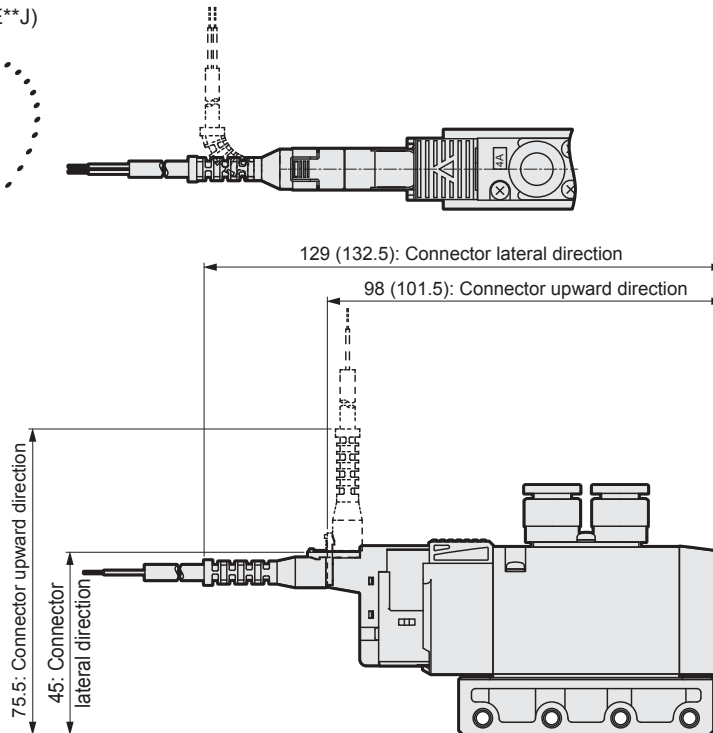
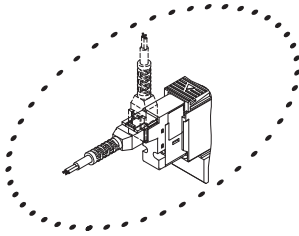
Dimensions

● E type connector type (E)



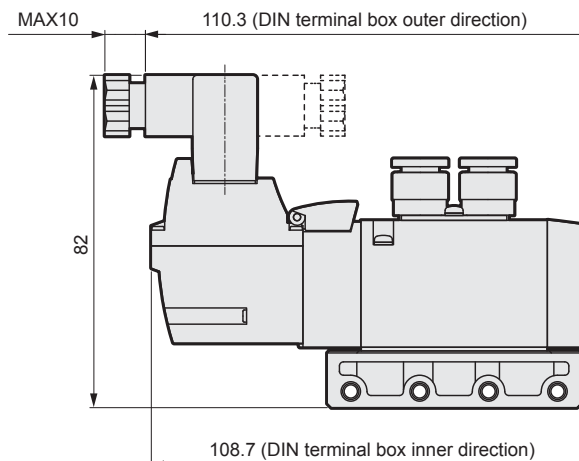
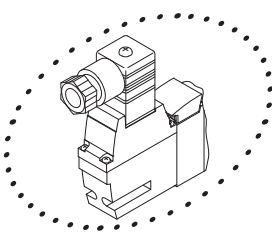
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GD2 Series

Discrete valve; body piping

Dimensions



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GDIE
M4GDIE
MN4GDIE
Technical data
Safety precautions
Manifold Specifications

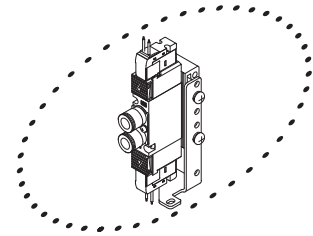
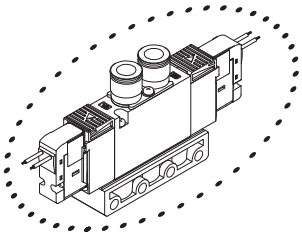
4GD220R

- 2-position double Grommet lead wire (blank)

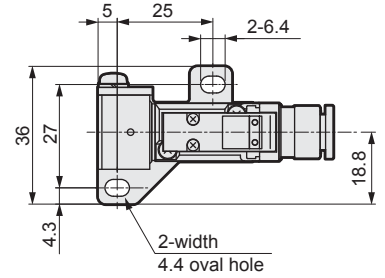
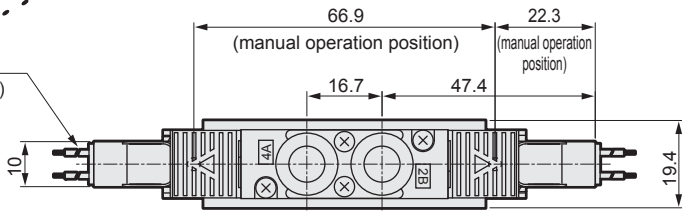
- Mounting plate type (P)

3GD2660R

- Dual 3 port valve integrated type Grommet lead wire (blank)

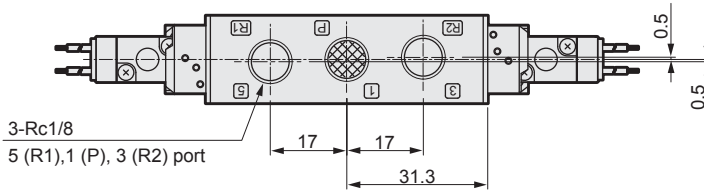
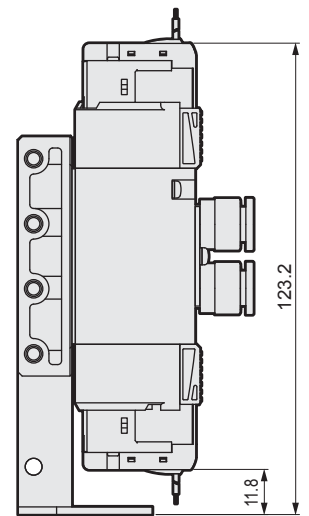
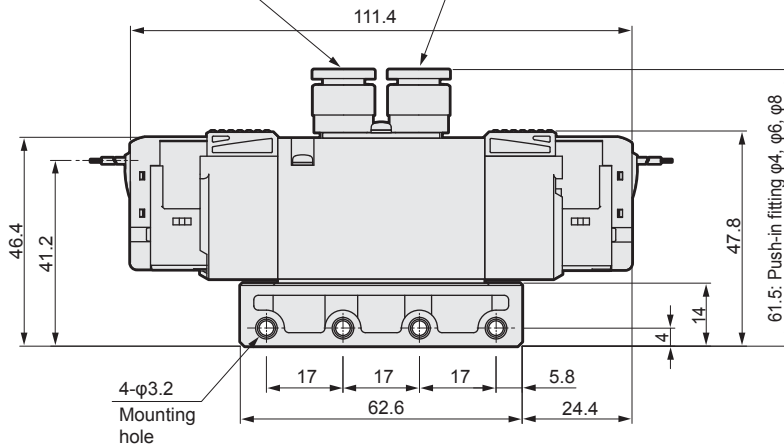
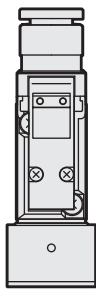


Lead wire length 300
(AWG#26, O.D. $\phi 1.3$)

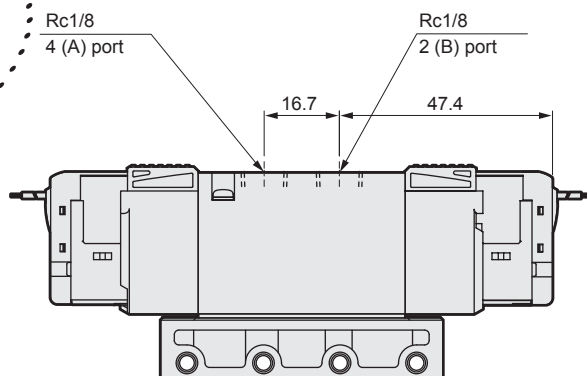
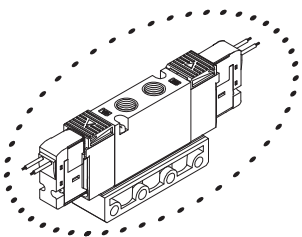


Push-in fitting $\phi 4$, $\phi 6$, $\phi 8$ (selection)
4 (A) port

Push-in fitting $\phi 4$, $\phi 6$, $\phi 8$ (selection)
2 (B) port

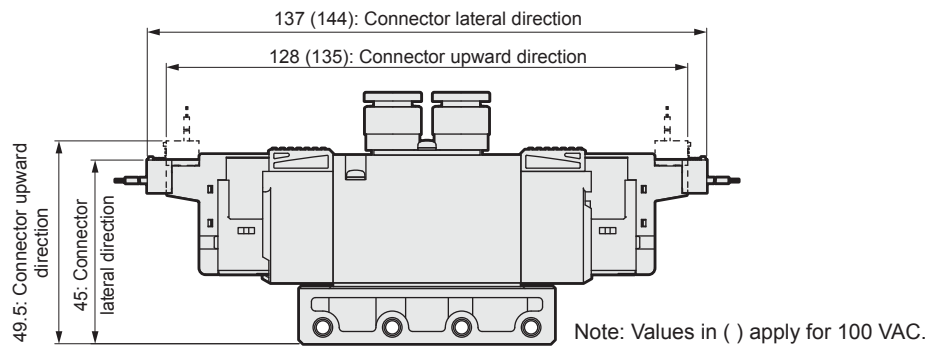
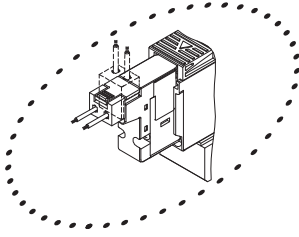


- Rc1/8 female thread type (06)

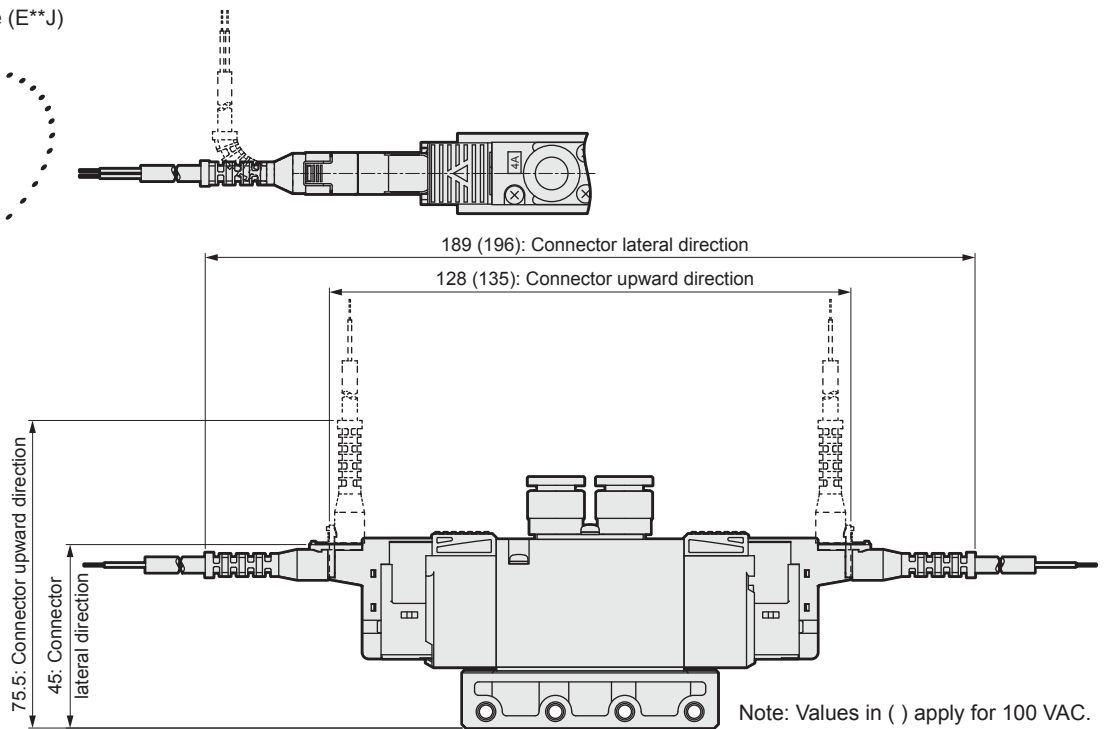
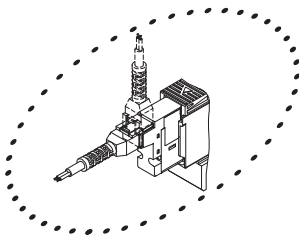


Dimensions

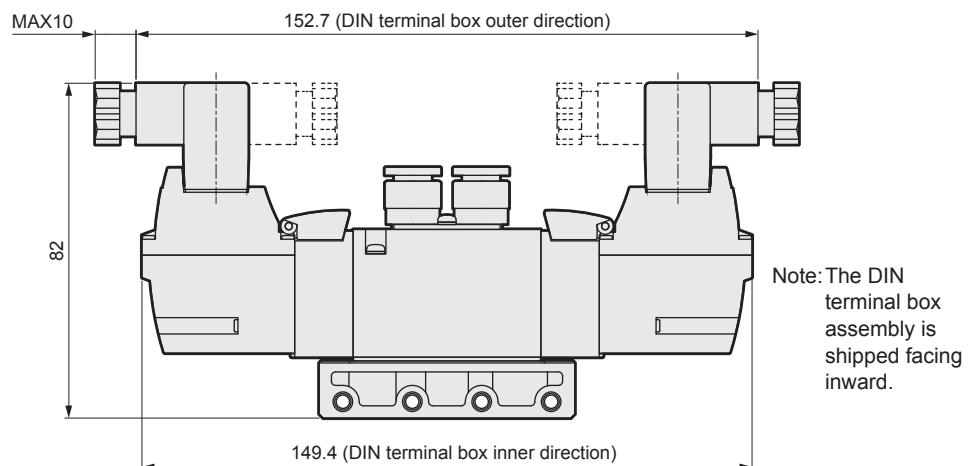
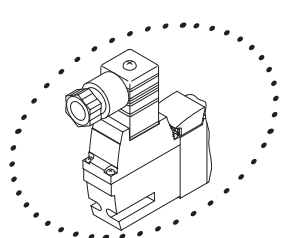
● E type connector type (E)



● EJ type connector type (E**J)



● DIN terminal box type (B)



4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautionsManifold
Specifications

4GD2 Series

Discrete valve; body piping

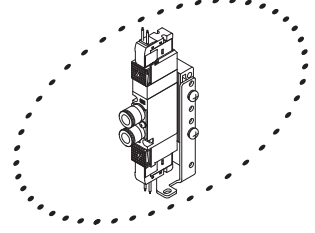
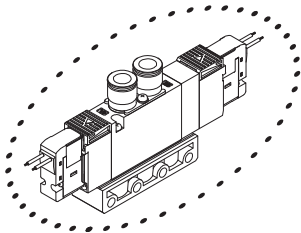
Dimensions



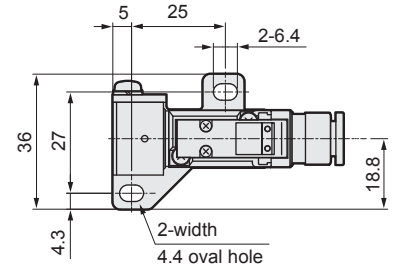
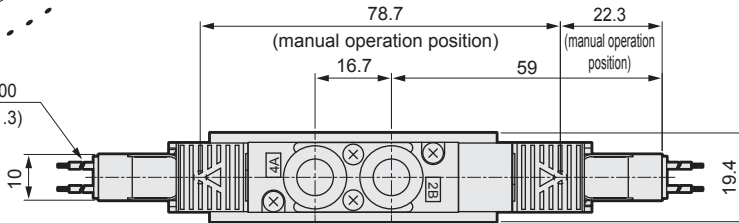
4GD2-0R

● 3 position Grommet lead wire (blank)

● Mounting plate type (P)

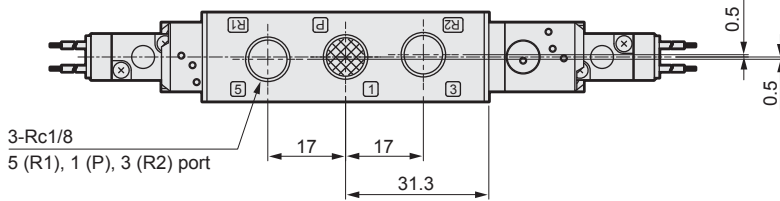
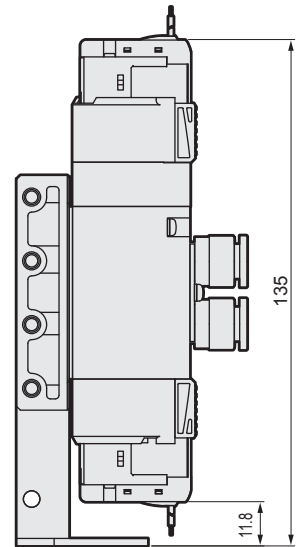
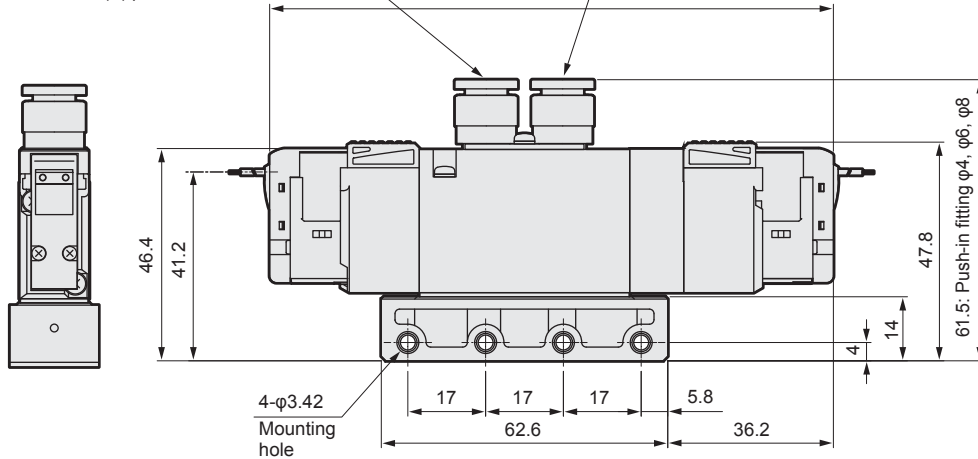


Lead wire length 300
(AWG#26, O.D. ϕ 1.3)

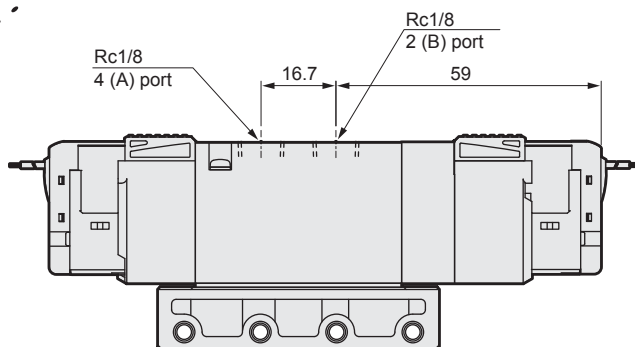
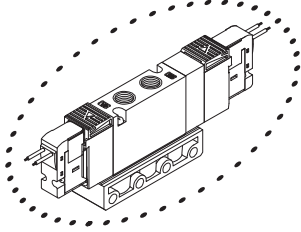


Push-in fitting ϕ 4, ϕ 6, ϕ 8 (selection)
4 (A) port

Push-in fitting ϕ 4, ϕ 6, ϕ 8 (selection)
2 (B) port



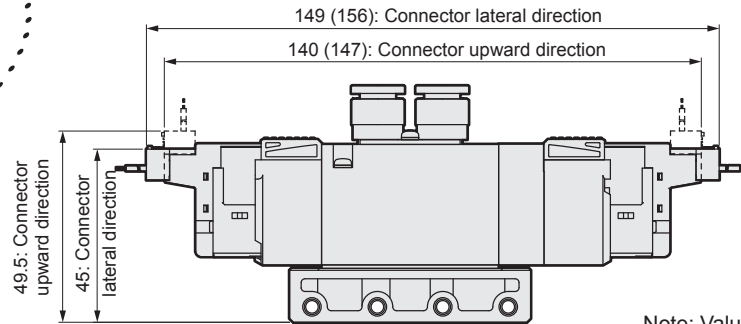
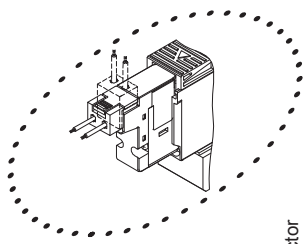
● Rc1/8 female thread type (06)



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GDIE
M4GDIE
MN4GDIE
Technical data
Safety precautions
Manifold Specifications

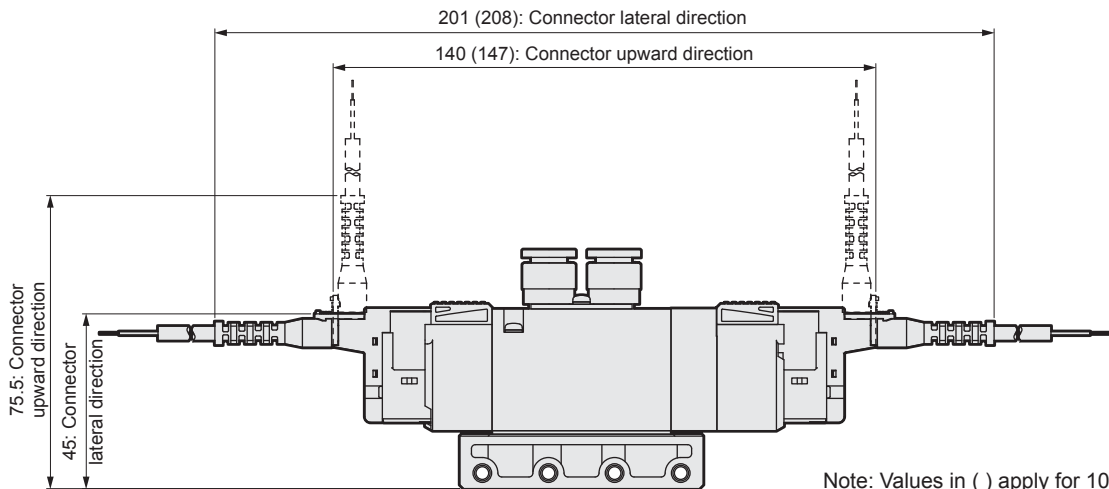
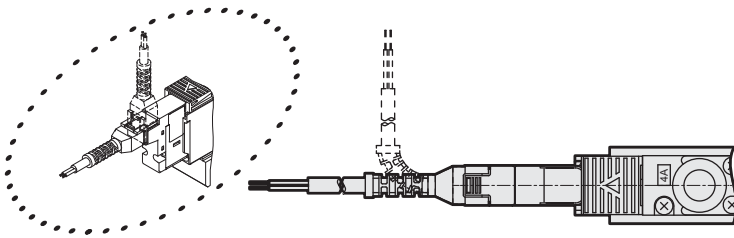
Dimensions

● E type connector type (E)



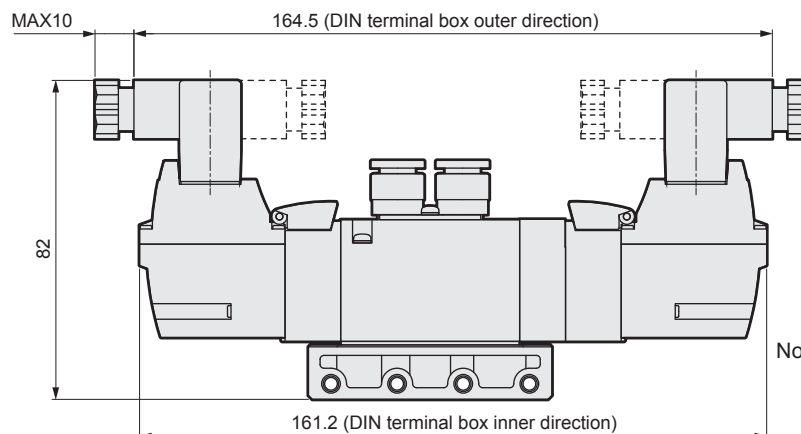
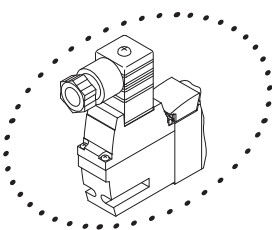
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GD3 Series

Discrete valve; body piping

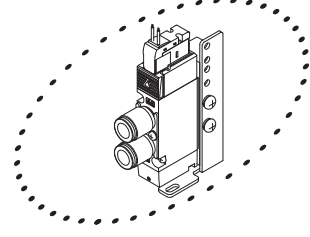
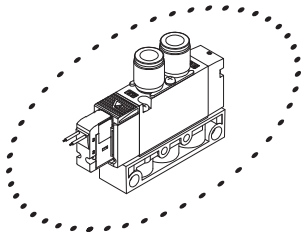
Dimensions



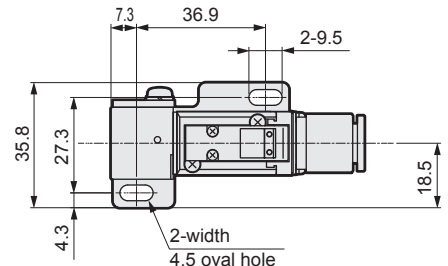
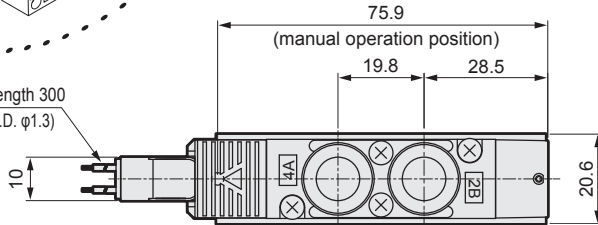
4GD310R

● 2-position single Grommet lead wire (blank)

● Mounting plate type (P)

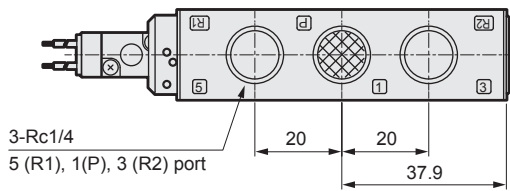
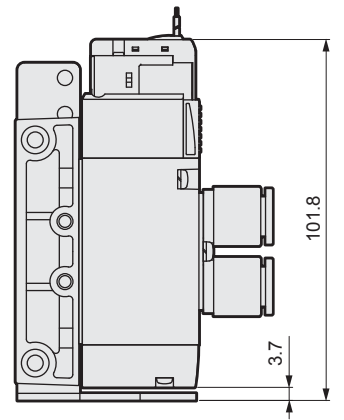
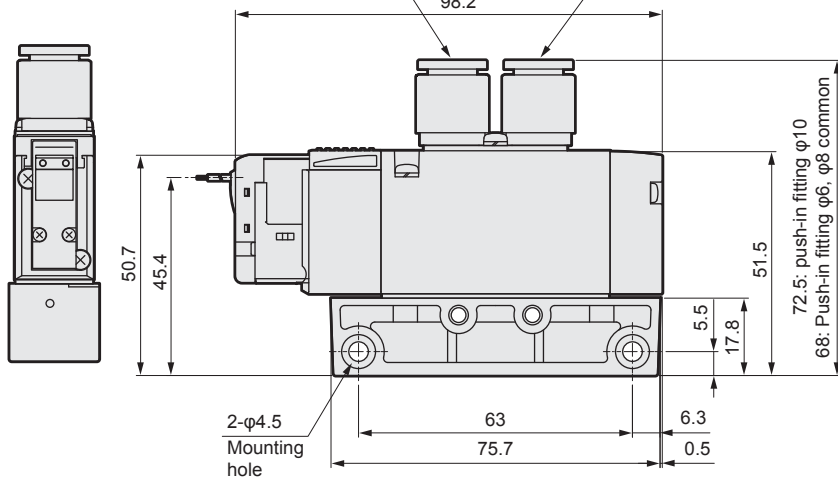


Lead wire length 300
(AWG#26, O.D. ϕ 1.3)

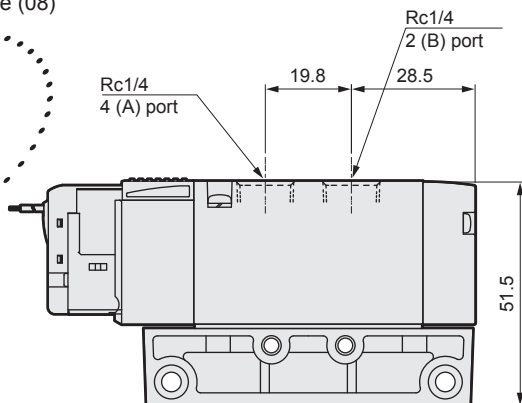
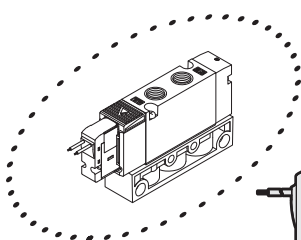


Push-in fitting ϕ 6, ϕ 8, ϕ 10 (selection)
4 (A) port

Push-in fitting ϕ 6, ϕ 8, ϕ 10 (selection)
2 (B) port



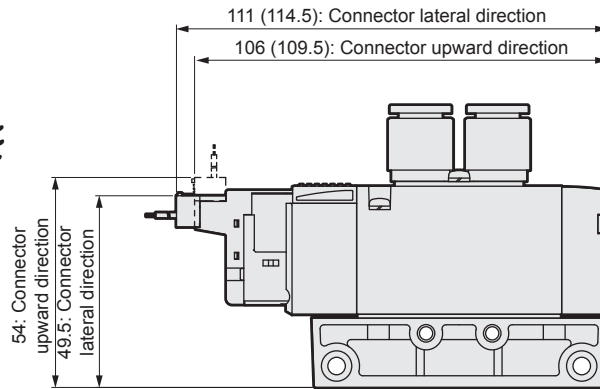
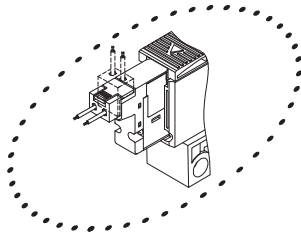
● Rc1/4 female thread type (08)



4GAB
M4GAB
MN4GAB
Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

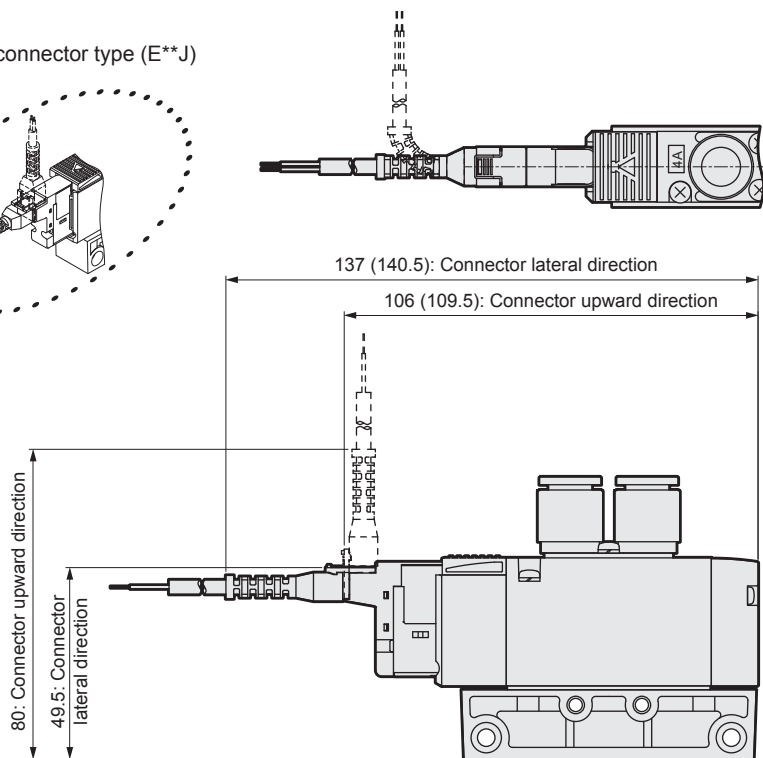
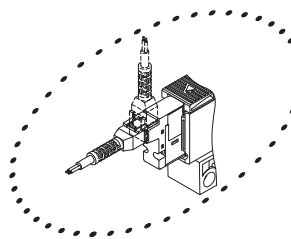
Dimensions

● E type connector type (E)



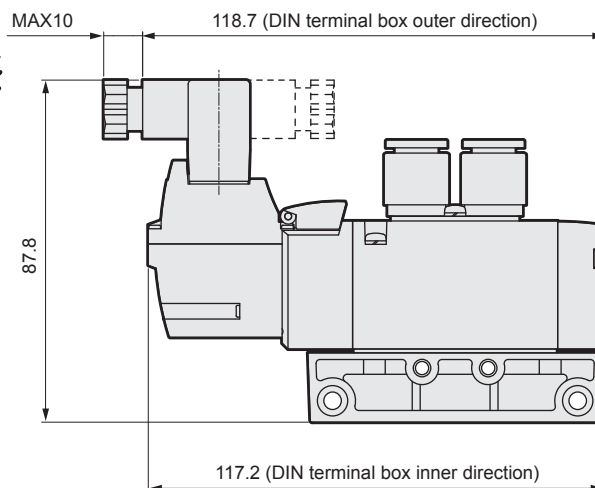
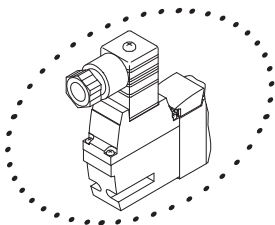
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GD3 Series

Discrete valve; body piping

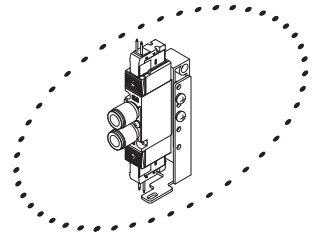
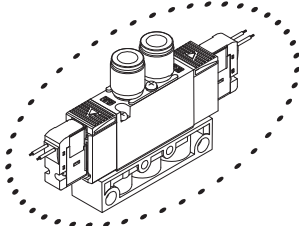
Dimensions



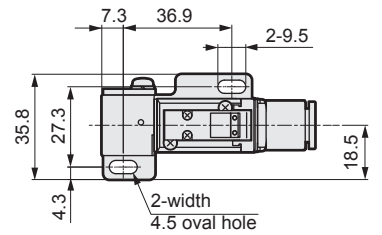
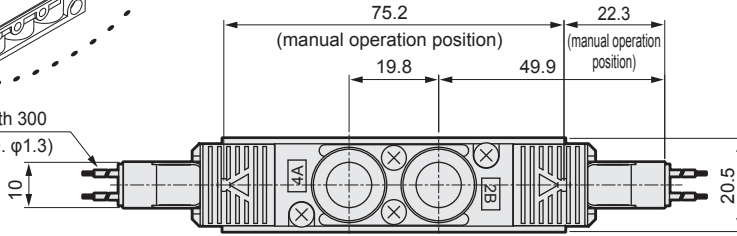
4GD320R

● 2-position double Grommet lead wire (blank)

● Mounting plate type (P)

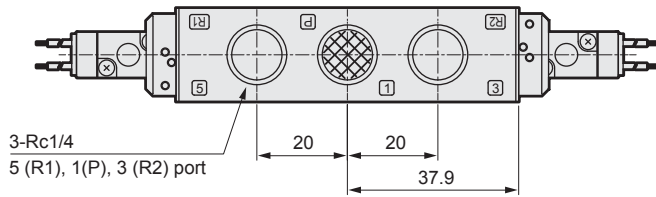
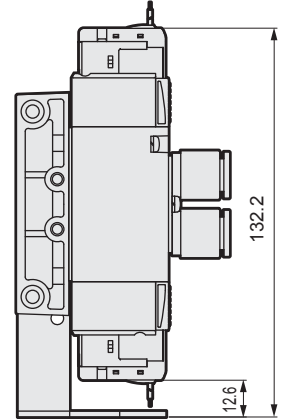
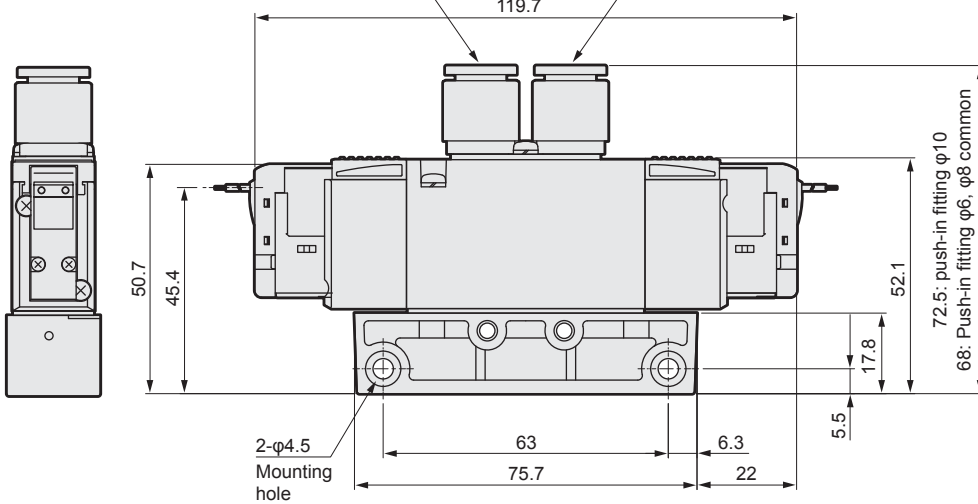


Lead wire length 300
(AWG#26, O.D. $\phi 1.3$)

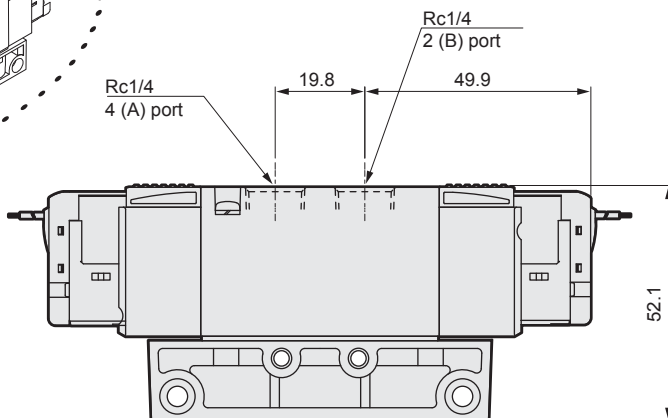
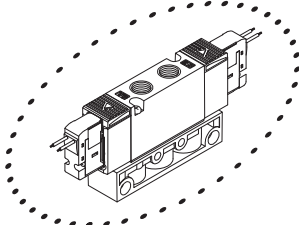


Push-in fitting $\phi 6, \phi 8, \phi 10$ (selection)
4 (A) port

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



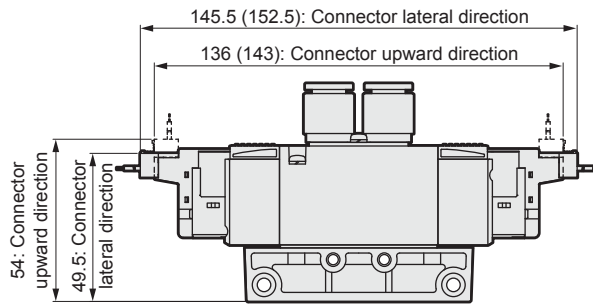
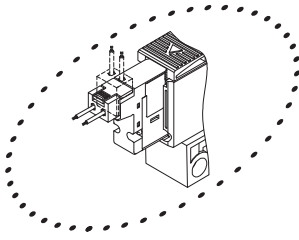
● Rc1/4 female thread type (08)



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

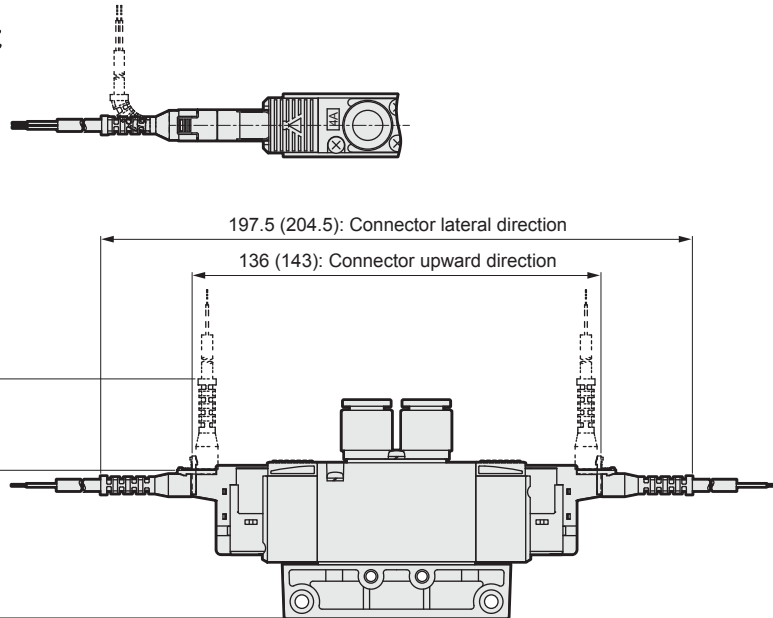
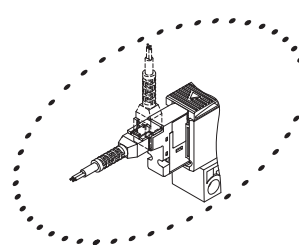
Dimensions

● E type connector type (E)



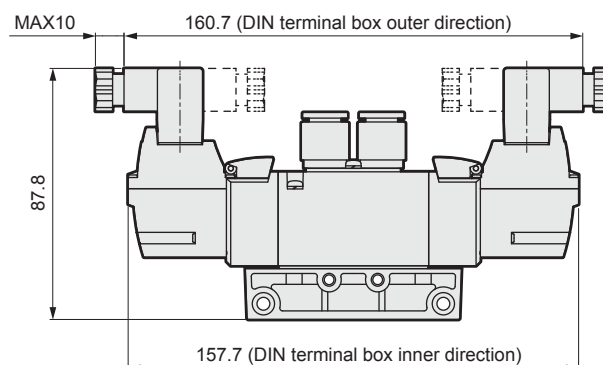
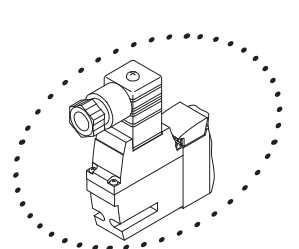
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GD3 Series

Discrete valve; body piping

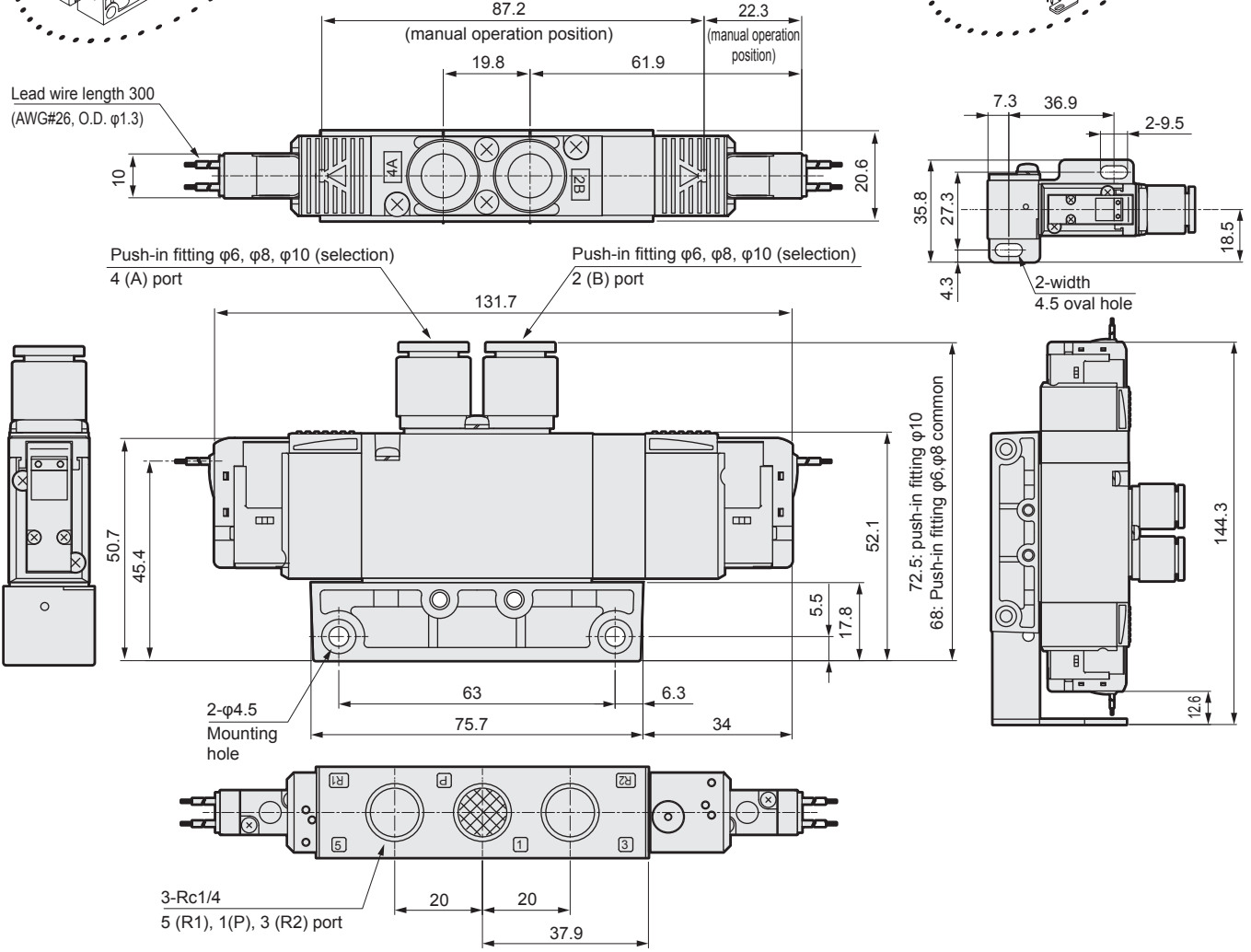
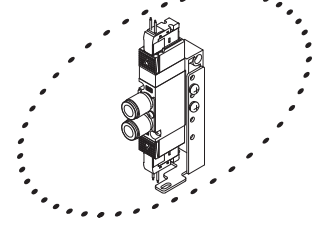
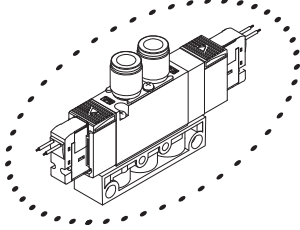
Dimensions



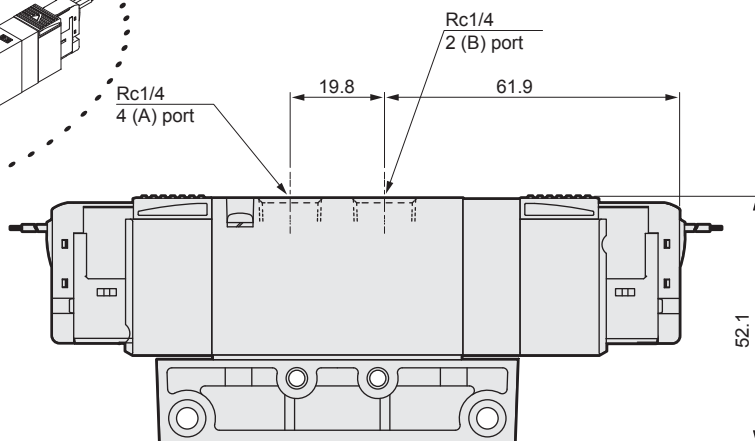
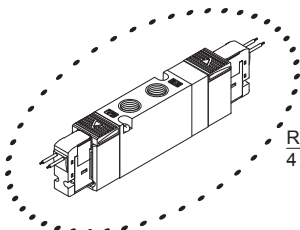
4GD3 0R

● 3-position Grommet lead wire (blank)

● Mounting plate type (P)



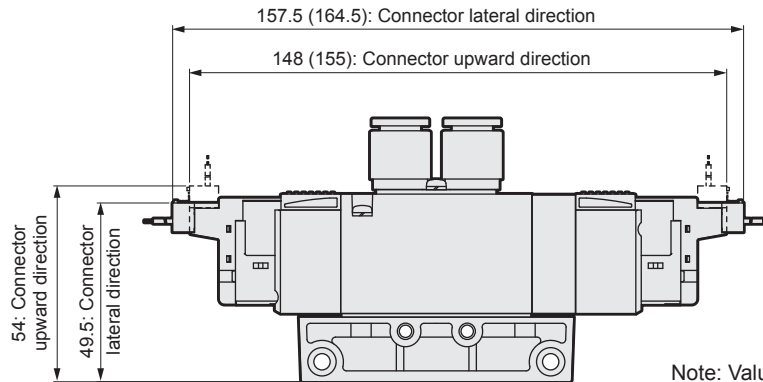
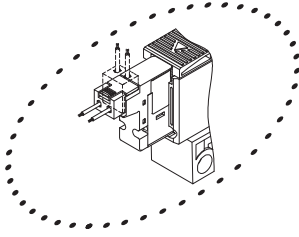
● Rc1/4 female thread type (08)



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

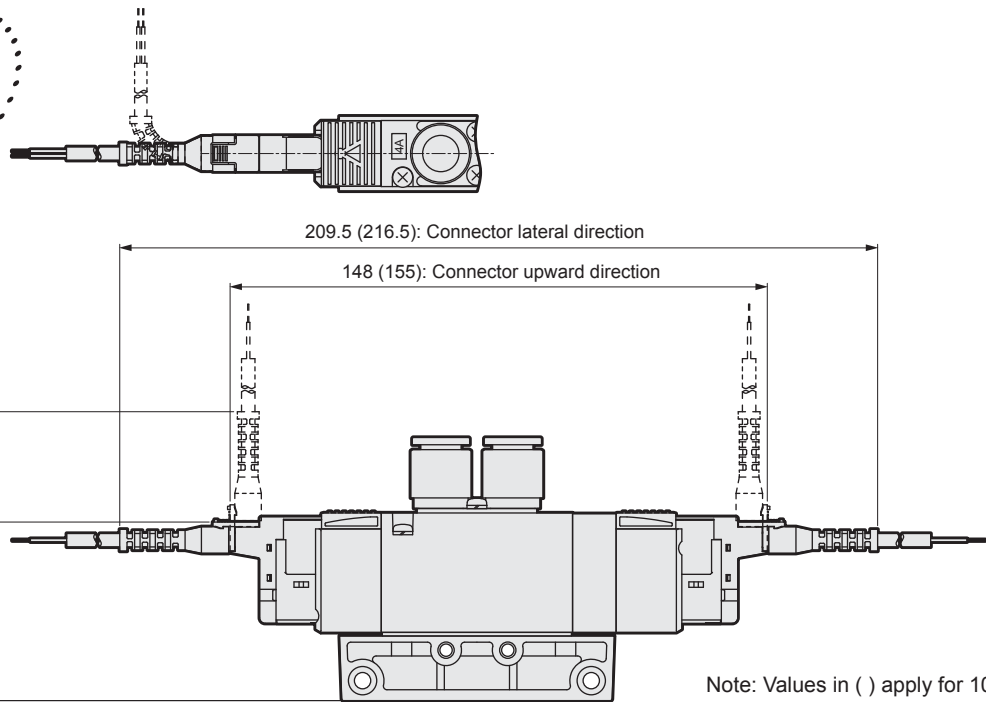
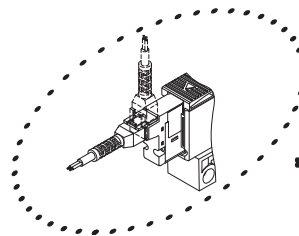
Dimensions

● E type connector type (E)



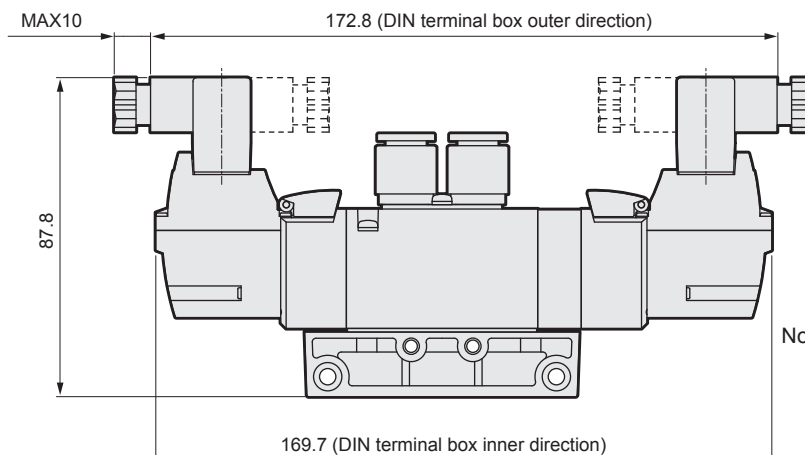
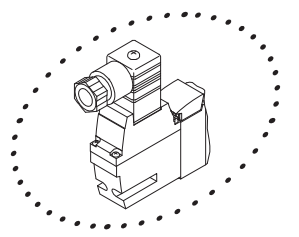
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

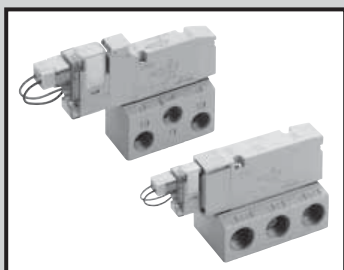
M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications



Discrete valve
Base piping

3GE1, 2 & 4GE1, 2, 3 Series

● Applicable cylinder bore size: $\phi 20$ to $\phi 100$



4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

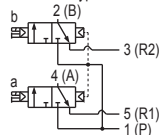
Technical data

Safety
precautions

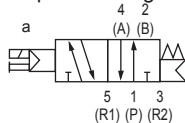
Manifold
Specifications

JIS symbol

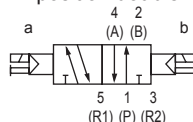
- Dual 3 port valve integrated type
(A side valve: N.C. type, B side valve: N.C. type)



- 5 port valve
2-position single

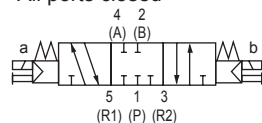


- 2-position double

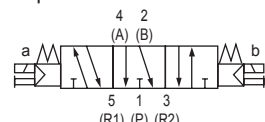


- 3-position

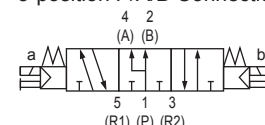
All ports closed



- 3-position A/B/R Connection



- 3-position P/A/B Connection



Common specifications

Descriptions		
Valve type and operation method	Pilot-operated soft spool valve	
Working fluid	Compressed air	
Max. working pressure MPa	0.7	
Min. working pressure MPa	0.2	
Withstanding pressure Mpa	1.05	
Ambient temperature °C	-5 to 55 (no freezing)	
Fluid temperature °C	5 to 55	
Manual operating device	Non-locking/locking common type (standard)	
Pilot exhaust method	Internal pilot	Main valve/pilot valve common exhaust type
Lubrication	Note 1	Not required
Degree of protection	Note 2	Dust proof
Vibration/shock	m/s ²	50 or less / 300 or less
Working environment	Containing corrosive gas is not permissible	

Note 1 Use the turbine oil Class 1 ISO VG32 if lubricated.
Excessive or intermittent lubrication results in unstable operation.

Note 2 Avoid water drops or oil, etc. during use.
IP65 (jet-proof type) applies for DIN terminal box specifications. Note that the specified adaptive cord outer diameter and tightening torque must be used for fixing.

Electrical specification

Descriptions					
Rated voltage		24 VDC	12 VDC	100 VAC	200 VAC
Voltage fluctuation range		±10%			
Holding current A (Note 3)		0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
Power consumption W (Note 3)		0.35 (0.40)		-	
Apparent power VA (Note 3) (Note 4)		-		0.93 (0.98)	1.26
Thermal class		B			
Surge suppressor		Option			
Indicator		Light (option)			

Note 3 Values in () apply when a light is attached.

Note 4 200 VAC is the DIN terminal box (with light) value.

Individual specifications

Descriptions		3GE1 & 4GE1	3GE2 & 4GE2	4GE3
Port size	A/B port	Rc1/8	Rc1/4	Rc1/4, Rc3/8
	P/R1/R2 port	Rc1/8	Rc1/4	Rc1/4, Rc3/8

Descriptions		3GE1 & 4GE1		3GE2 & 4GE2		4GE3		
		ON	OFF	ON	OFF	ON	OFF	
Response time ms	Dual 3 port valve integrated type	12	15	15	30	-	-	
	2-position	Single	15	25	20	30	25	40
		Double	15	-	20	-	25	-
		3-position ABR connection	20	30	25	35	35	50

Values including a light surge suppressor. The response time is the value at 0.5 MPa supply pressure, 20°C, with no lubrication. It varies depending on the pressure and the lubricant quality.

Descriptions			3GE1 & 4GE1	3GE2 & 4GE2	4GE3	
Weight g	2-position	Single	Grommet lead wire	80 (38)	158 (76)	221 (102)
			E type connector	82 (40)	160 (78)	223 (104)
			DIN terminal box	-	195 (113)	255 (136)
	2-position	Double	Grommet lead wire	97 (55)	175 (93)	240 (121)
			E type connector	101 (59)	179 (97)	244 (125)
			DIN terminal box	-	218 (136)	280 (161)
	3-position	All ports closed	Grommet lead wire	98 (56)	186 (104)	249 (130)
			E type connector	102 (60)	190 (108)	253 (134)
			DIN terminal box	-	229 (147)	289 (170)

• Values in () do not include a piping adaptor. Values for E type connector include the socket assembly (with 300 mm lead wire).

For EJ type connector, add 16 g/connector to E type connector weight.

• The weight of dual 3 port valve integrated type is the same as that of 2-position double.

Flow characteristics

Model no.	Valve Position		P→A/B		A/B→R1/R2	
			C (dm ³ /(s·bar))	b	C (dm ³ /(s·bar))	b
3GE1	Dual 3 port valve integrated type		0.92	0.08	1.0	0.11
3GE2	Dual 3 port valve integrated type		1.7	0.42	2.1	0.32
4GE1	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
4GE2	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
4GE3	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

Note1: Effective sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

[Ozone specifications](#) / [Cutting oil proof specifications](#)

Select the option "A" of (E) in how to order on page 380.

[Specifications for secondary battery](#)

- In order to be applicable for secondary battery manufacturing process, confine materials for air passage and sliding section

** - Voltage - **P4**

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

3GE1, 2 & 4GE1, 2, 3 Series

Discrete valve; base piping

How to order

● Discrete valve

4GE1 1 0 R - 06 - E2 ○ ○ - 3

3GE1 66 0 R - 06 - E2 ○ ○ - 3

● Discrete valve for mounting base

4GE1 1 9 R - 00 - E2 H ○ - 3

3GE1 66 9 R - 00 - E2 H C - 3



D Electrical connections
Refer to page 337 for the circuit diagram with surge suppressor/light.

E Option

F Pilot exhaust method

G Voltage

⚠ Note on model no. selection

- Note 1 Dimensions are the same as the respective 2-position double.
- Note 2 3-position all ports closed and PAB connection are not provided with malfunction prevention valve. Refer to Page 628 for details on the malfunction prevention valve.
- Note 3 The P port has a filter built inside as a standard.
- Note 4 Only the DIN terminal box are supported.
- Note 5 Grommet lead wire specifications are only for DC voltage.
- Note 6 The light is also attached to the terminal box.
- Note 7 AC voltage comes with a rectifier circuit.

A Model No.

	3GE1	3GE2	4GE1	4GE2	4GE3
--	------	------	------	------	------

Symbol	Descriptions					
--------	--------------	--	--	--	--	--

B Valve 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			●	●	●
66	Dual 3 port valve integrated type Note 1	A side valve: Normally closed	●	●		
		B side valve: Normally closed				

C Port size

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)
00	Discrete valve for mounting base	●	●	●	●

D Electrical connections

Blank	Grommet lead wire (300 mm) (Note 5)	●	●	●	●	●
B	DIN terminal box (Pg7) with surge suppressor/light Note 6				●	●
BN	DIN terminal box (Pg7) (without terminal box) with surge suppressor Note 6		●		●	●

E type connector (upward/lateral direction common)

E0	Lead wire (300 mm) Note 7	●	●	●	●	●
E00	Lead wire (500 mm) Note 7	●	●	●	●	●
E01	Lead wire (1000 mm) Note 7	●	●	●	●	●
E02	Lead wire (2000 mm) Note 7	●	●	●	●	●
E03	Lead wire (3000 mm) Note 7	●	●	●	●	●
E0N	Without lead wire (without socket) Note 7	●	●	●	●	●
E1	Without lead wire (with socket/terminal) Note 7	●	●	●	●	●
E2	Lead wire (300 mm) with surge suppressor/light	●	●	●	●	●
E20	Lead wire (500 mm) with surge suppressor/light	●	●	●	●	●
E21	Lead wire (1000 mm) with surge suppressor/light	●	●	●	●	●
E22	Lead wire (2000 mm) with surge suppressor/light	●	●	●	●	●
E23	Lead wire (3000 mm) with surge suppressor/light	●	●	●	●	●
E2N	Without lead wire (without socket) with surge suppressor/light	●	●	●	●	●
E3	Without lead wire (with socket/terminal) with surge suppressor/light	●	●	●	●	●

EJ type connector (socket with cover, upward/lateral direction common)

E01J	Lead wire (1000 mm) Note 7	●	●	●	●	●
E02J	Lead wire (2000 mm) Note 7	●	●	●	●	●
E03J	Lead wire (3000 mm) Note 7	●	●	●	●	●
E21J	Lead wire (1000 mm) with surge suppressor/light	●	●	●	●	●
E22J	Lead wire (2000 mm) with surge suppressor/light	●	●	●	●	●
E23J	Lead wire (3000 mm) with surge suppressor/light	●	●	●	●	●

E Option

Blank	Non-locking/locking common manual override	●	●	●	●	●
H	With malfunction prevention valve Note 2	●	●	●	●	●
A	Ozone/cutting oil proof	●	●	●	●	●
F	A/B port filter integrated Note 3	●	●	●	●	●

F Pilot exhaust method

Blank	Common exhaust type (Pilot exhaust check valve integrated)	●	●	●	●	●
C	Open type	○	○	○	○	○

G Voltage

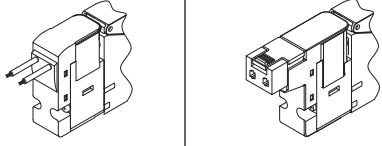
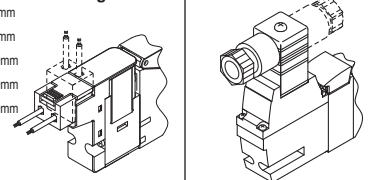
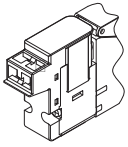
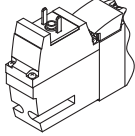
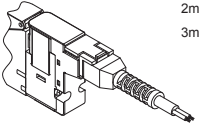
1	100 VAC (rectifier integrated)	●	●	●	●	●
2	200 VAC (rectifier integrated) Note 4		●		●	●
3	24 VDC	●	●	●	●	●
4	12 VDC	●	●	●	●	●

is not available.

○ Contact CKD for price and availability.

3GE1, 2 & 4GE1, 2, 3 Series

Discrete valve; base piping

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

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

3GE1 & 4GE1 Series

Discrete valve; base piping

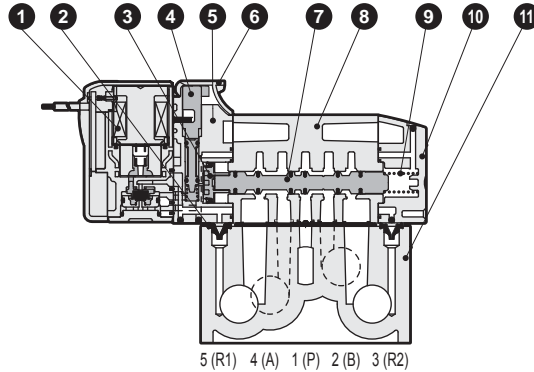
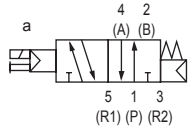
Internal structure and parts list

3GE1660R

- Dual 3 port valve integrated type Refer to page 384.
- Grommet lead wire (blank)

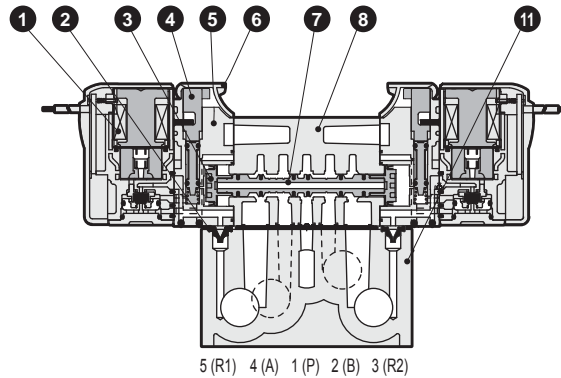
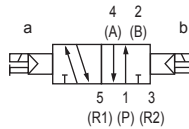
4GE110R

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



4GE120R

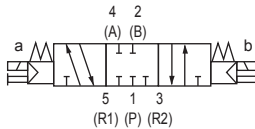
- 2-position double
- Grommet lead wire (blank)



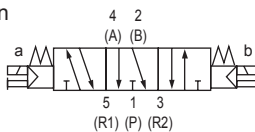
4GE1³/₄/₅0R

- 3-position
- Grommet lead wire (blank)

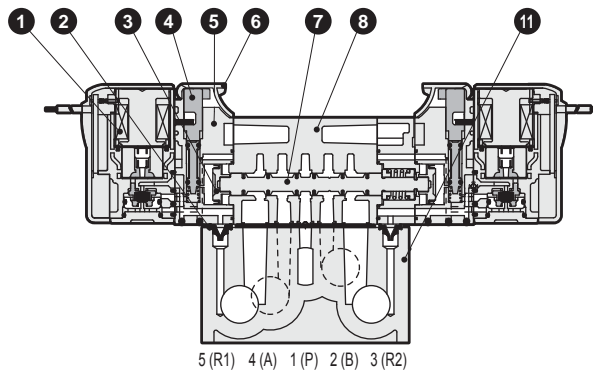
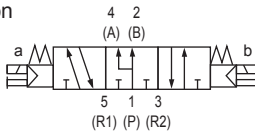
All ports closed



A/B/R connection



P/A/B Connection



Main parts list

Parts list

No.	Parts name	Material	No.	Parts name	Material
1	Coil assembly	-	1	Coil assembly	4GR- ^{Electrical connections} - * -COIL-[Voltage] Blank: Standard A: Ozone specifications Blank: Grommet lead wire
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR			
3	Piston D assembly	-			
4	Manual operating device	Plastic			
5	Piston room	Plastic			
6	Manual protection cover	Plastic			
7	Spool assembly	-			
8	Body	Aluminum alloy die-casting			
9	Spool spring	Stainless steel			
10	Cap	Plastic			
11	Sub plate	Aluminum alloy die-casting			

4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

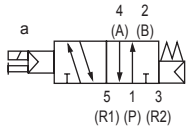
Internal structure and parts list

3GE2660R

- Dual 3 port valve integrated type Refer to page 384.
- Grommet lead wire (blank)

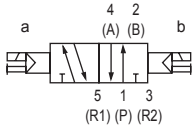
4GE210R & 4GE310R

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



4GE220R & 4GE320R

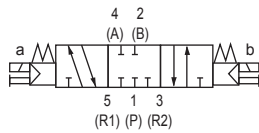
- 2-position double
- Grommet lead wire (blank)



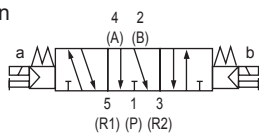
4GE2^{3/4/5}0R & 4GE3^{3/4/5}0R

- 3-position
- Grommet lead wire (blank)

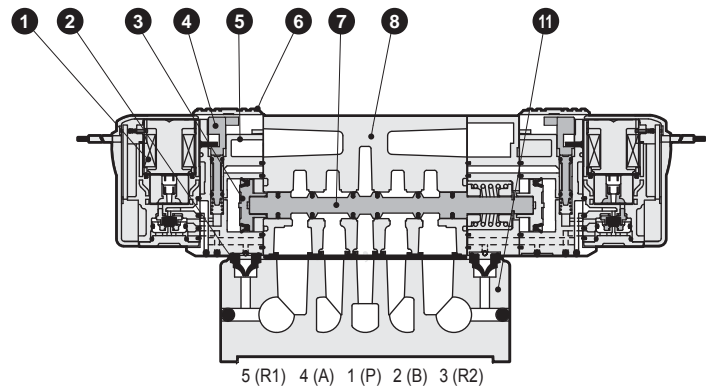
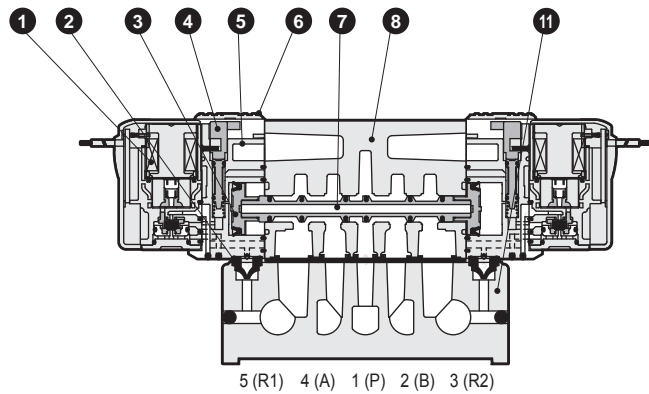
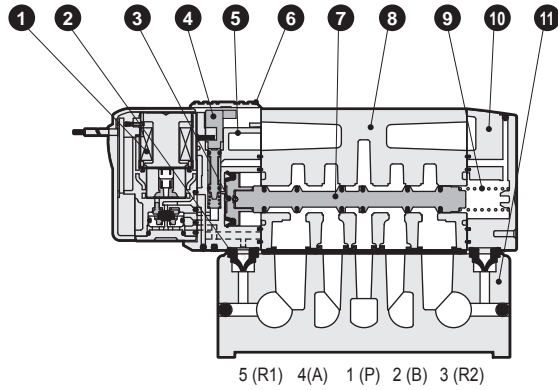
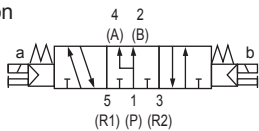
All ports closed



A/B/R connection



P/A/B Connection



Main parts list

No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR
3	Piston D assembly	-
4	Manual operating device	Plastic
5	Piston room	Plastic
6	Manual protection cover	Plastic
7	Spool assembly	-
8	Body	Aluminum alloy die-casting
9	Spool spring	Stainless steel
10	Cap	Plastic
11	Sub plate	Aluminum alloy die-casting

Parts list

No.	Parts name	Material
1	Coil assembly	4GR- Electrical connections - * -COIL- Voltage Blank: Standard A: Ozone specifications Blank: Grommet lead wire

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

3GE1, 2 Series

Discrete valve; base piping

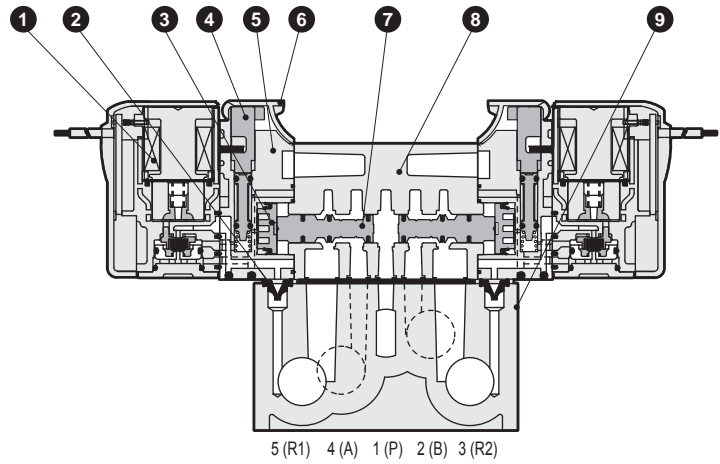
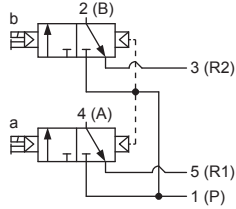
Internal structure and parts list

4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

3GE1660R

- Dual 3 port valve integrated type
Grommet lead wire (blank)

A side valve: Normally closed,
B side valve: Normally closed
N.C./N.C. type

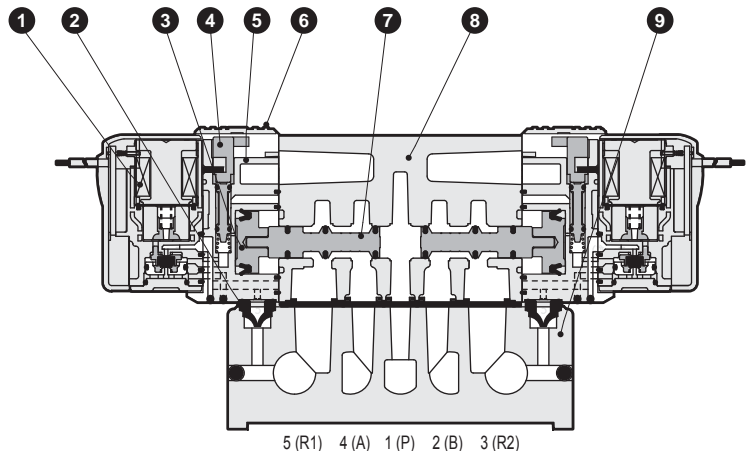
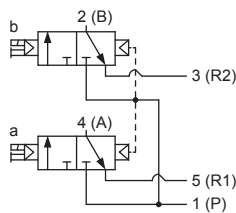


5 (R1) 4 (A) 1 (P) 2 (B) 3 (R2)

3GE2660R

- Dual 3 port valve integrated type
Grommet lead wire (blank)

A side valve: Normally closed,
B side valve: Normally closed
N.C./N.C. type



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

Main parts list

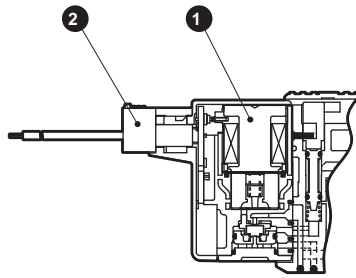
No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR
3	Piston assembly	-
4	Manual operating device	Plastic
5	Piston room	Plastic
6	Manual protection cover	Plastic
7	Spool assembly	-
8	Body	Aluminum alloy die-casting
9	Sub plate	Aluminum alloy die-casting

Parts list

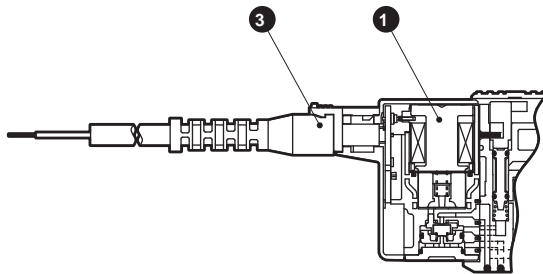
No.	Parts name	Material
1	Coil assembly	4GR- ^{Electrical connections} - * -COIL-[Voltage] Blank: Standard A: Ozone specifications Blank: Grommet lead wire

Electrical connections internal structure and parts list

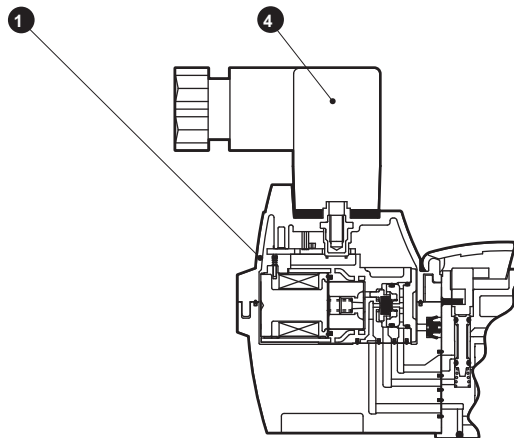
● E type connector type E**



● EJ type connector type E**J



● DIN terminal box type B



Main parts list

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

Parts list

No.	Parts name	Material
1	Coil assembly	4GR- Electrical connections - * -COIL-[Voltage] Blank: Standard A: Ozone specifications E* : E type connector type E*J: Socket with cover type B* : DIN terminal box type B includes the DIN terminal box BN does not include 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]

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautionsManifold
Specifications

4GE1 Series

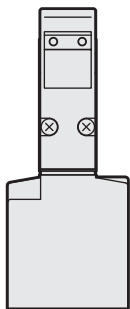
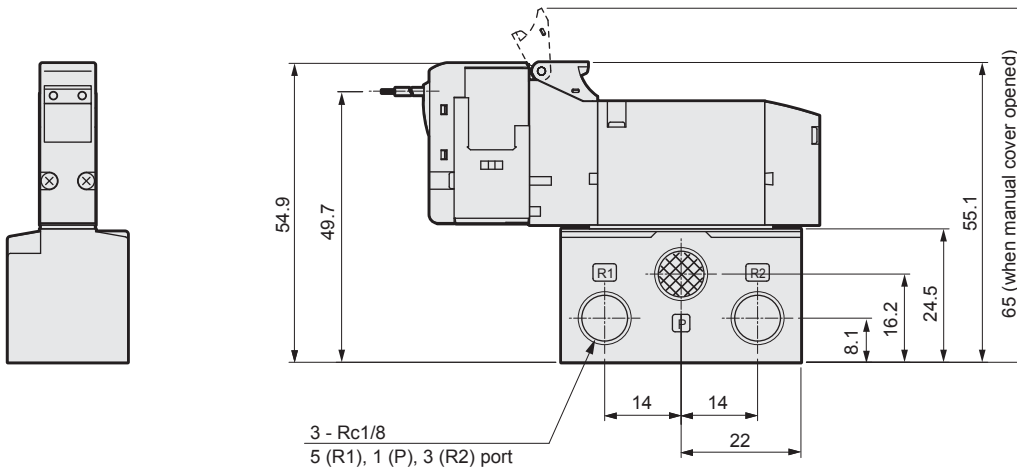
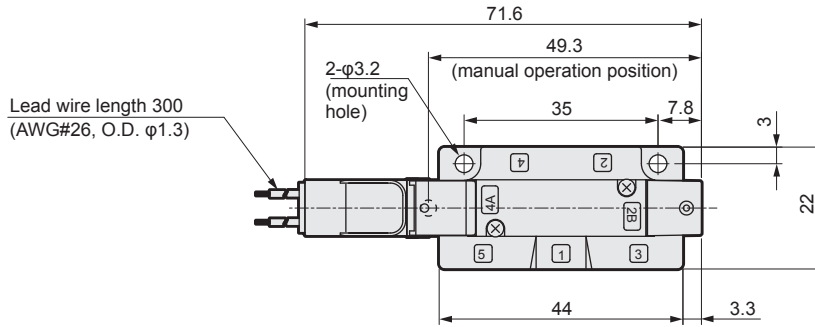
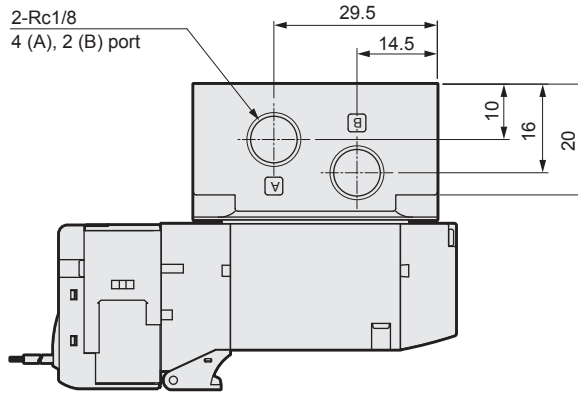
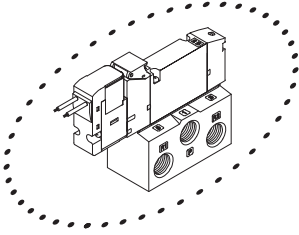
Discrete valve; base piping

Dimensions



4GE110R

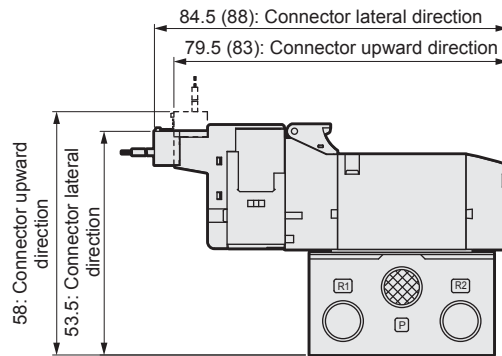
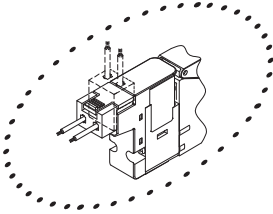
● 2-position single Grommet lead wire (blank)



- 4GAB
- M4GAB
- MN4GAB
- 4GAB Master valve
- 4GD/E
- M4GD/E
- MN4GD/E
- Technical data
- Safety precautions
- Manifold Specifications

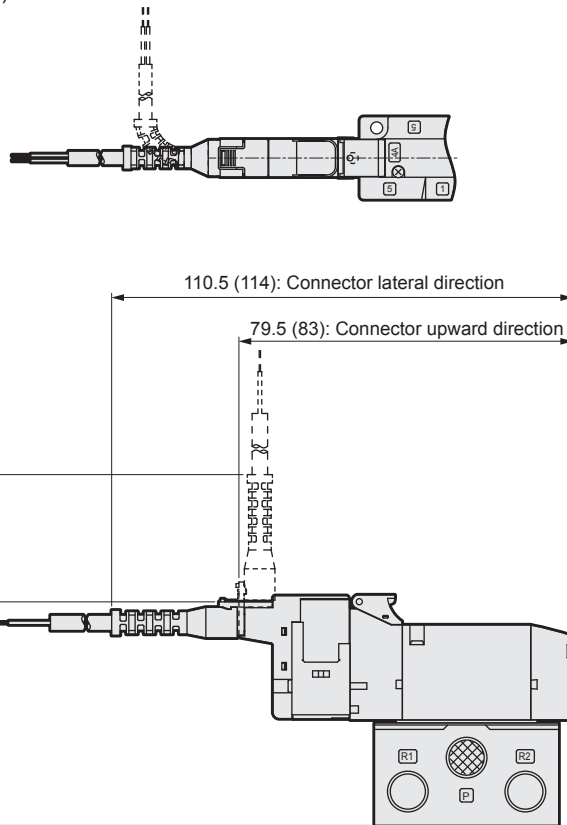
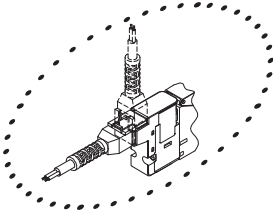
Dimensions

● E type connector type (E)



Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GB1 Series

Discrete valve; base piping

Dimensions



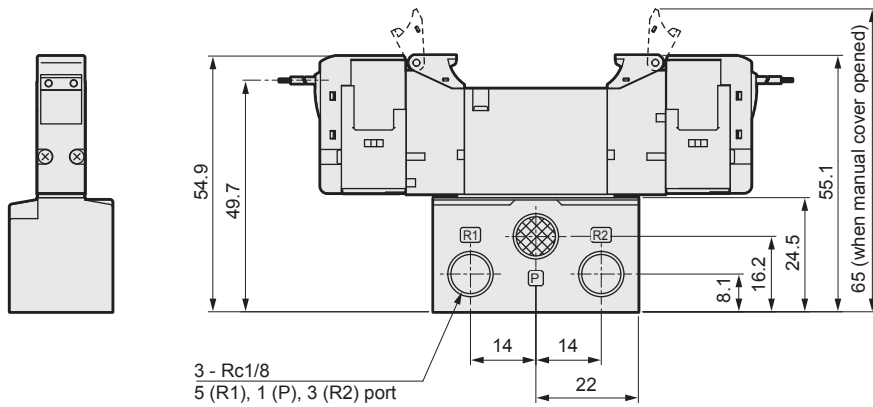
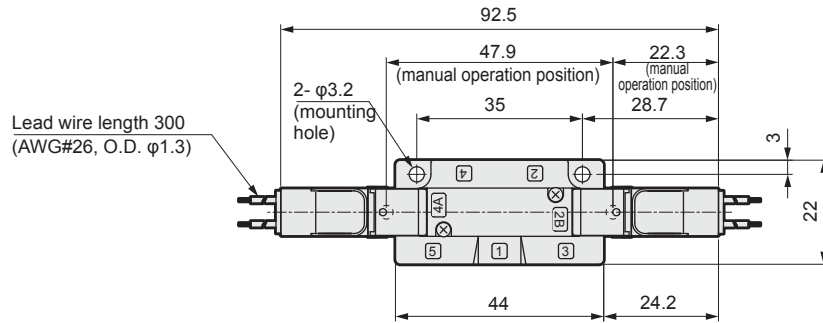
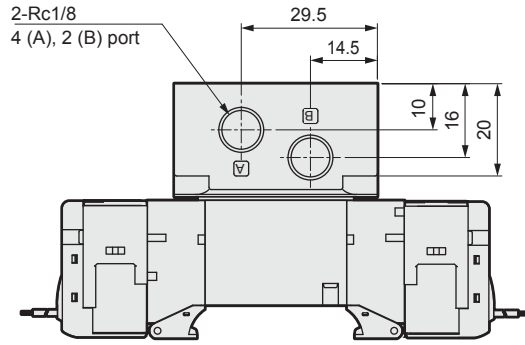
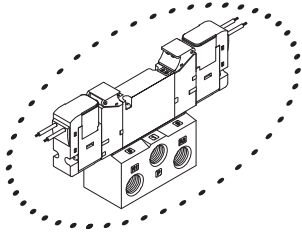
4GAB	M4GAB	MN4GAB	4GAB Master valve	4GD/E	M4GD/E	MN4GD/E	Technical data	Safety precautions	Manifold Specifications
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4GE120R

- 2-position double Grommet lead wire (blank)

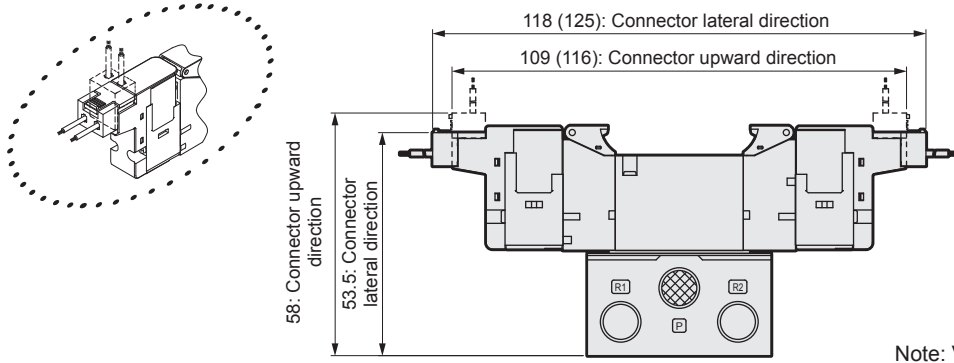
3GE1660R

- Dual 3 port valve integrated type Grommet lead wire (blank)

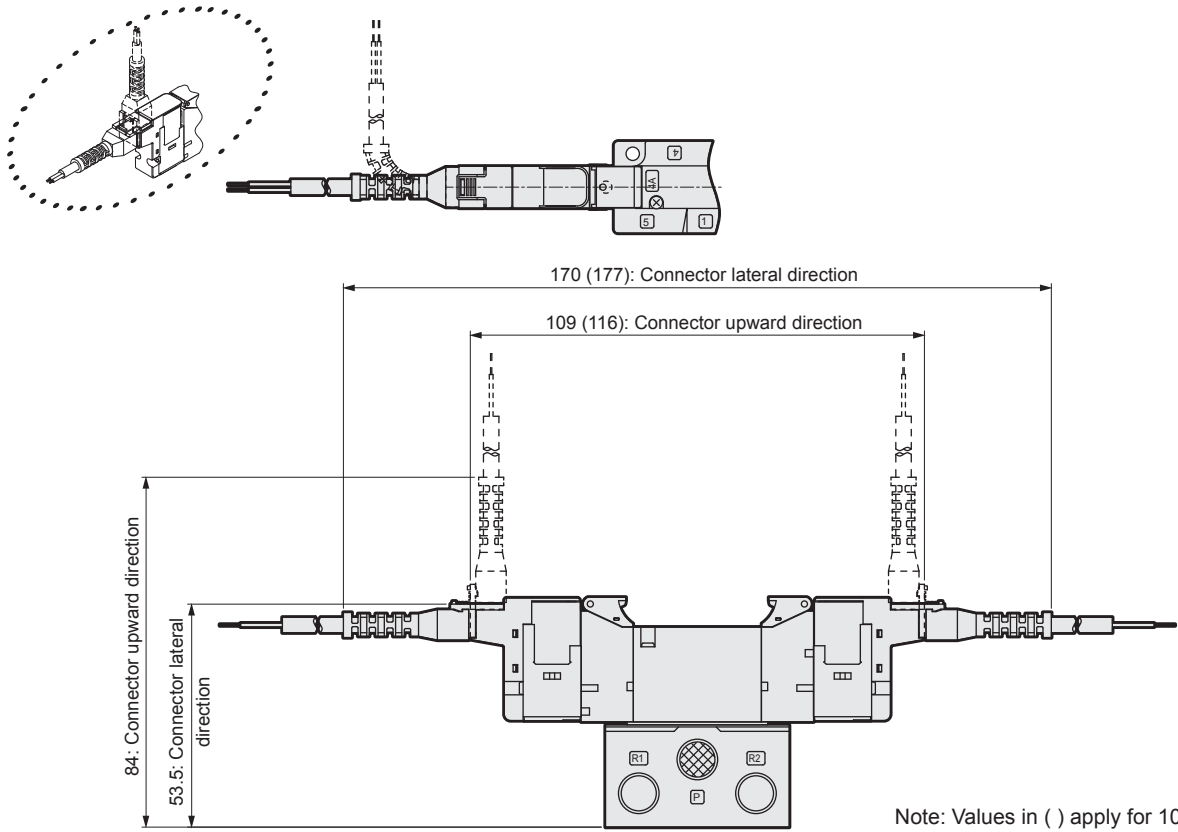


Dimensions

● E type connector type (E)



● EJ type connector type (E**J)



4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GE1 Series

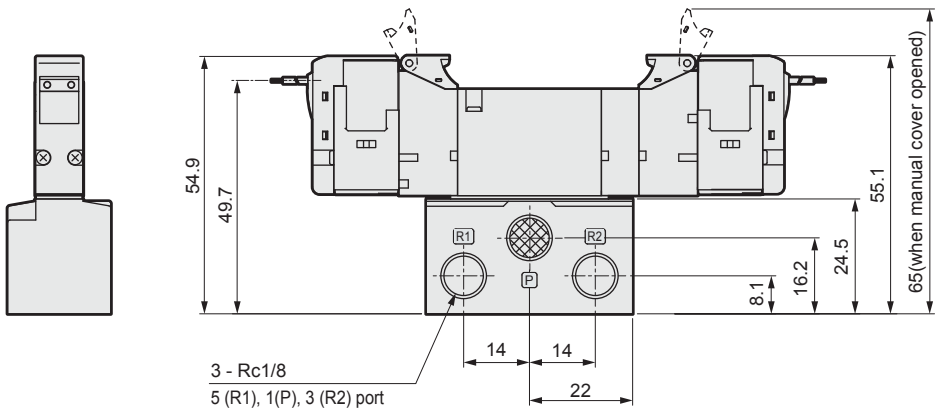
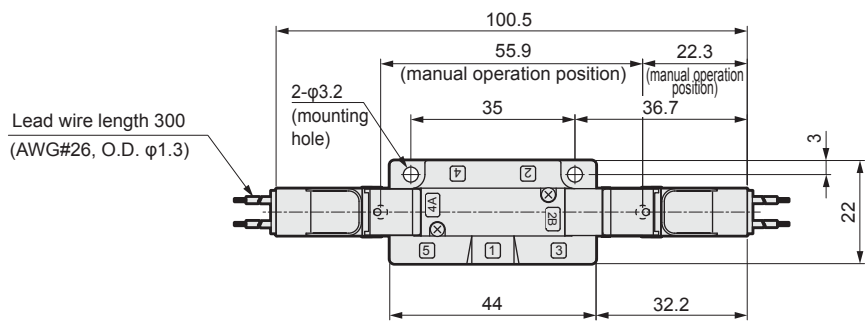
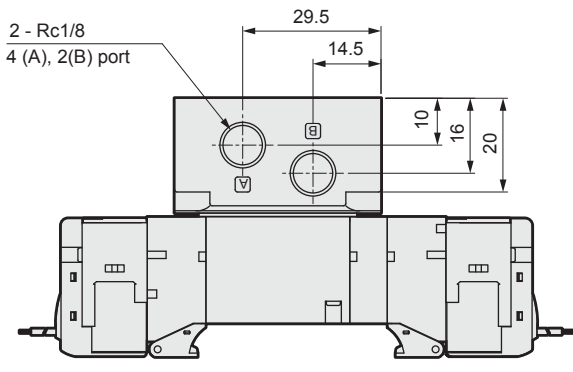
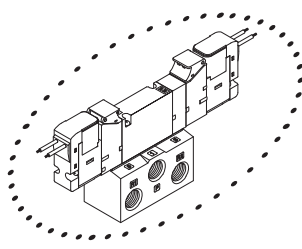
Discrete valve; base piping

Dimensions



4GE1³ 0R

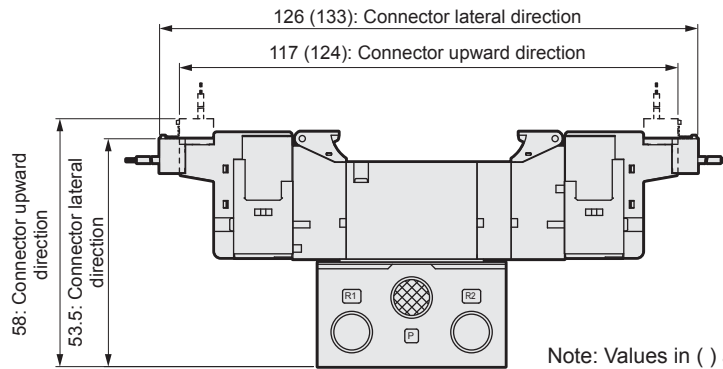
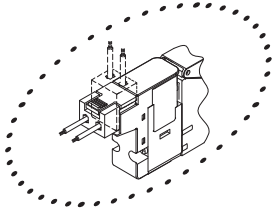
● 3-position Grommet lead wire (blank)



- 4GAB
- M4GAB
- MN4GAB
- 4GAB Master valve
- 4GD/E
- M4GD/E
- MN4GD/E
- Technical data
- Safety precautions
- Manifold Specifications

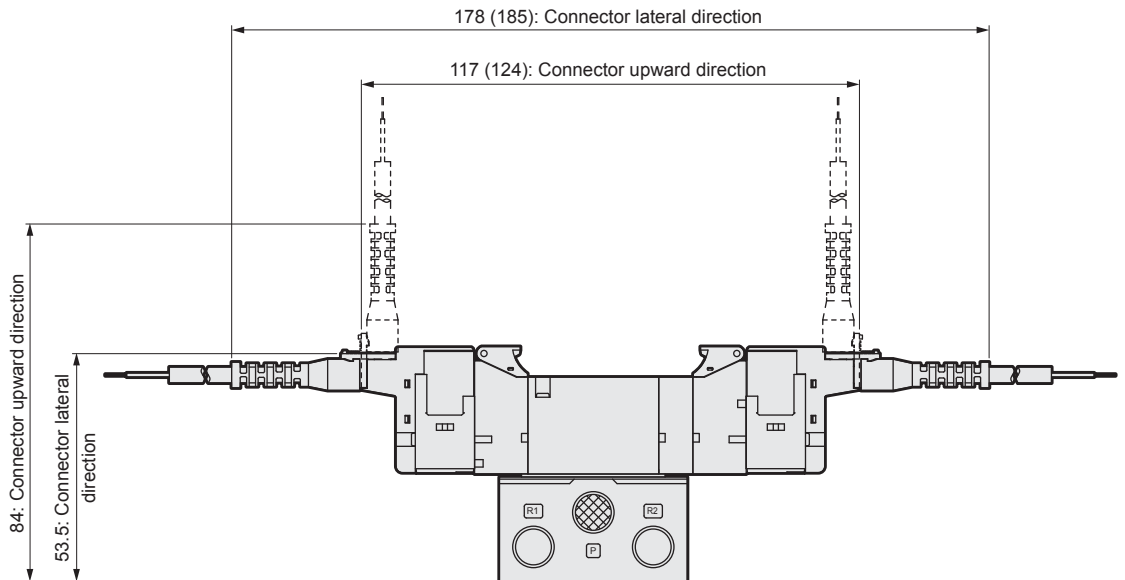
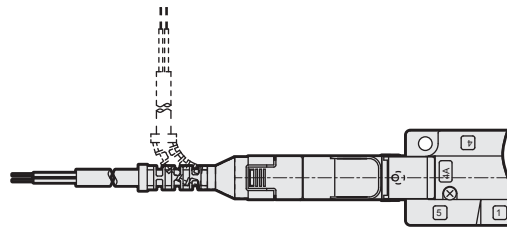
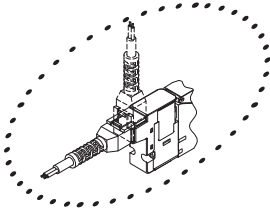
Dimensions

● E type connector type (E)



Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GE2 Series

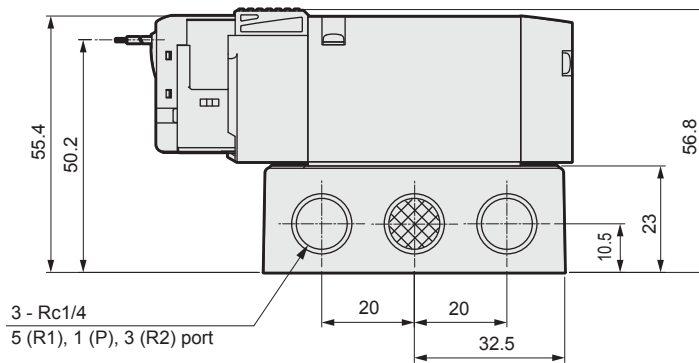
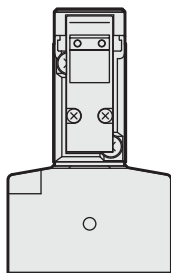
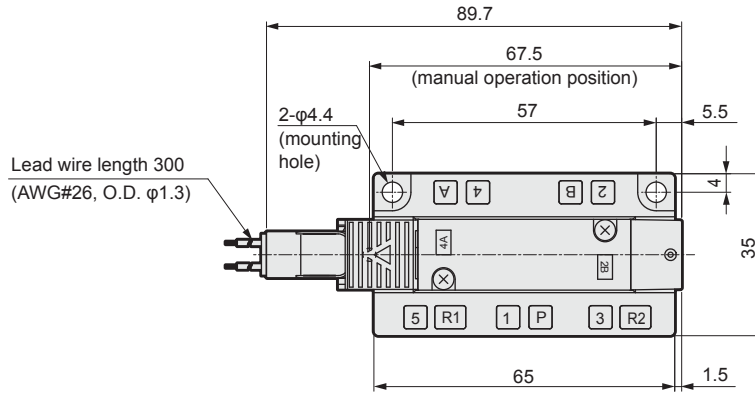
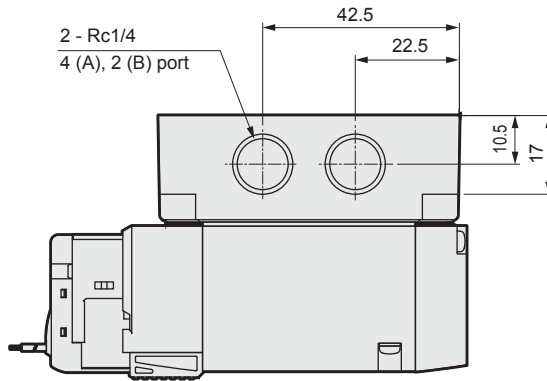
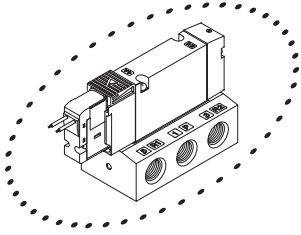
Discrete valve; base piping

Dimensions



4GE210R

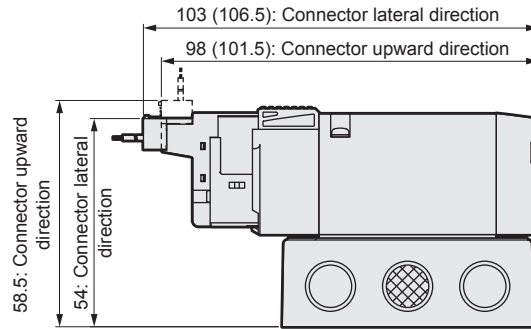
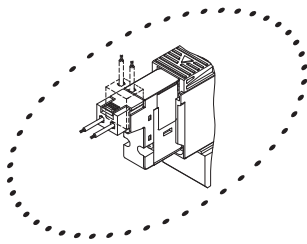
● 2-position single Grommet lead wire (blank)



4GAB
M4GAB
MN4GAB
4GAB
Master valve
4GDIE
M4GDIE
MN4GDIE
Technical data
Safety
precautions
Manifold
Specifications

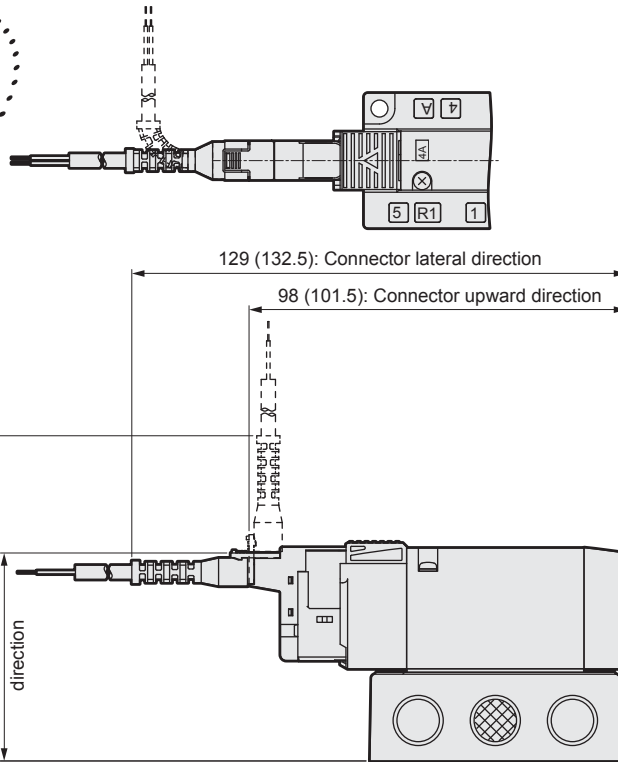
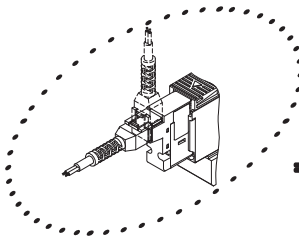
Dimensions

● E type connector type (E)



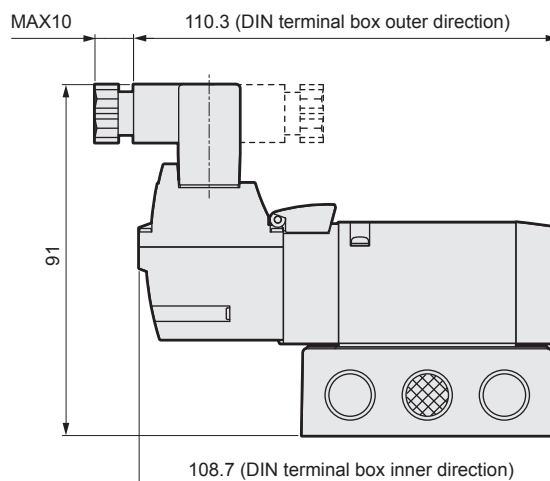
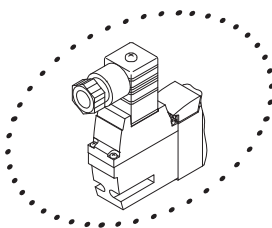
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GE2 Series

Discrete valve; base piping

Dimensions



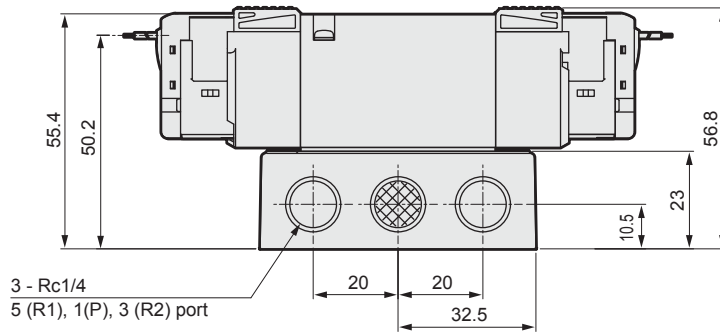
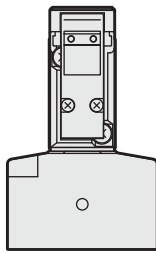
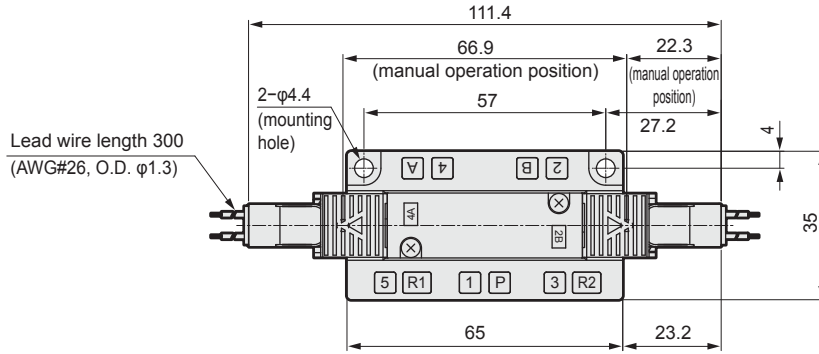
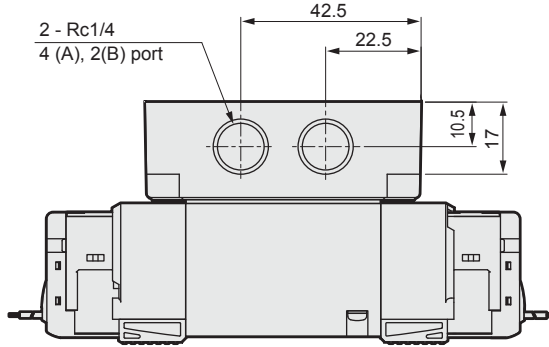
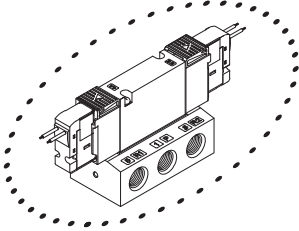
- 4GAB
- M4GAB
- MN4GAB
- 4GAB Master valve
- 4GD/E
- M4GD/E
- MN4GD/E
- Technical data
- Safety precautions
- Manifold Specifications

4GE220R

● 2-position double Grommet lead wire (blank)

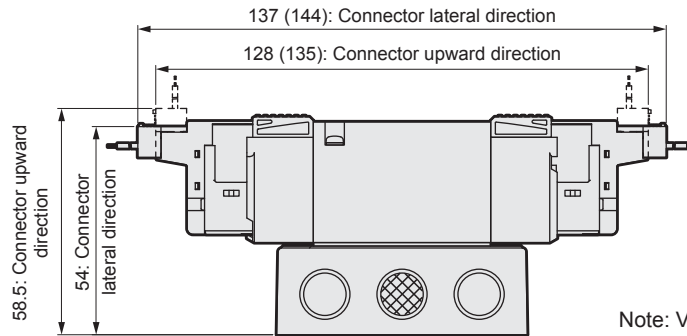
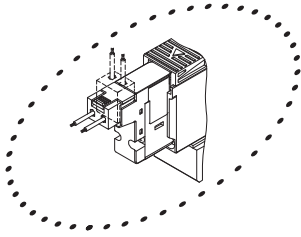
3GE2660R

● Dual 3 port valve integrated type Grommet lead wire (blank)



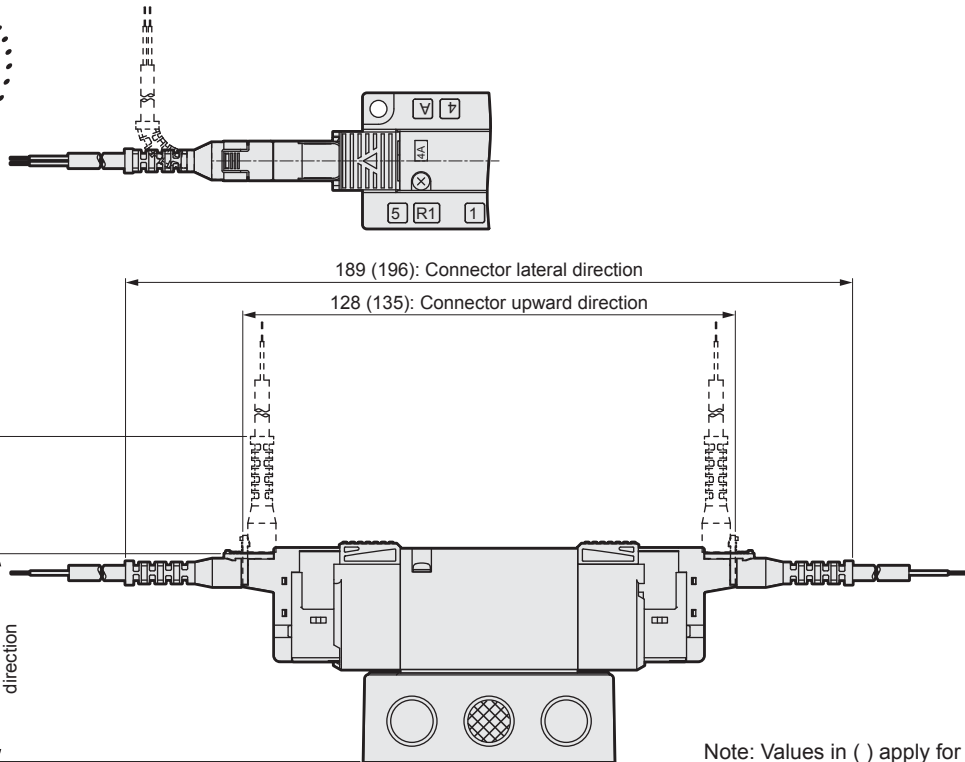
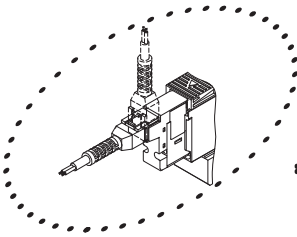
Dimensions

● E type connector type (E)



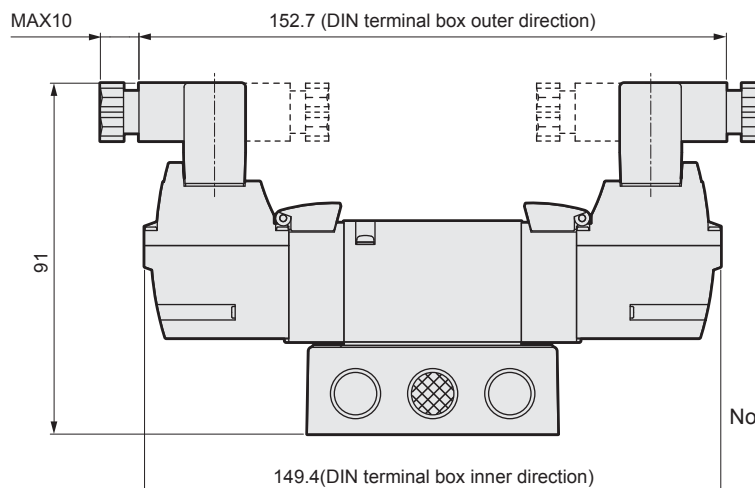
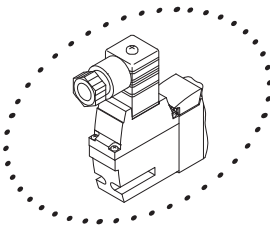
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GE2 Series

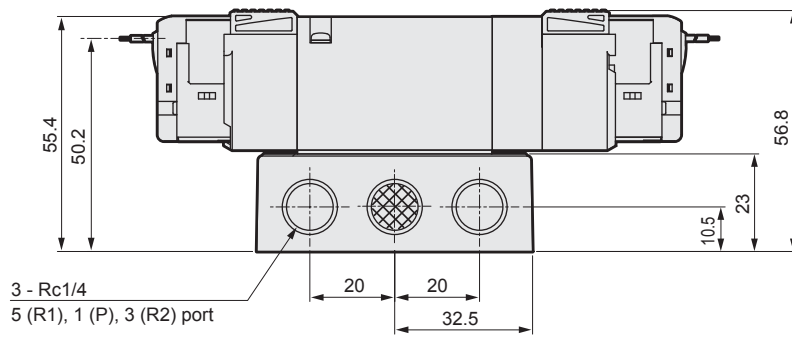
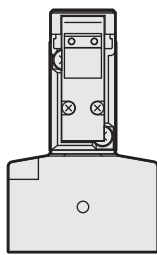
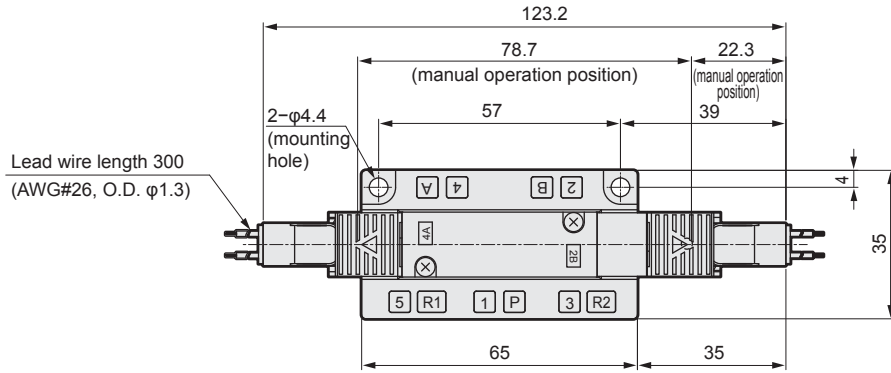
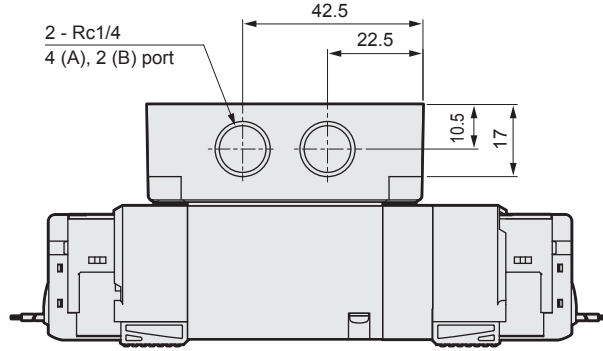
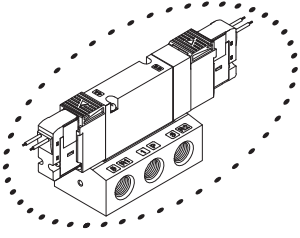
Discrete valve; base piping

Dimensions



4GE2 0R

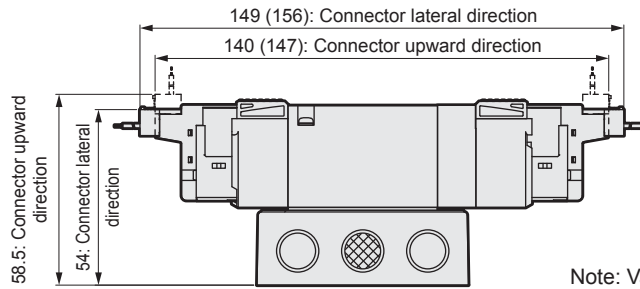
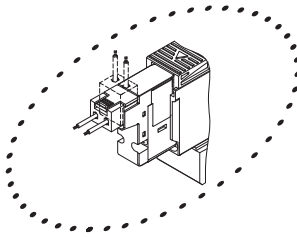
● 3-position Grommet lead wire (blank)



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GDIE
M4GDIE
MN4GDIE
Technical data
Safety precautions
Manifold Specifications

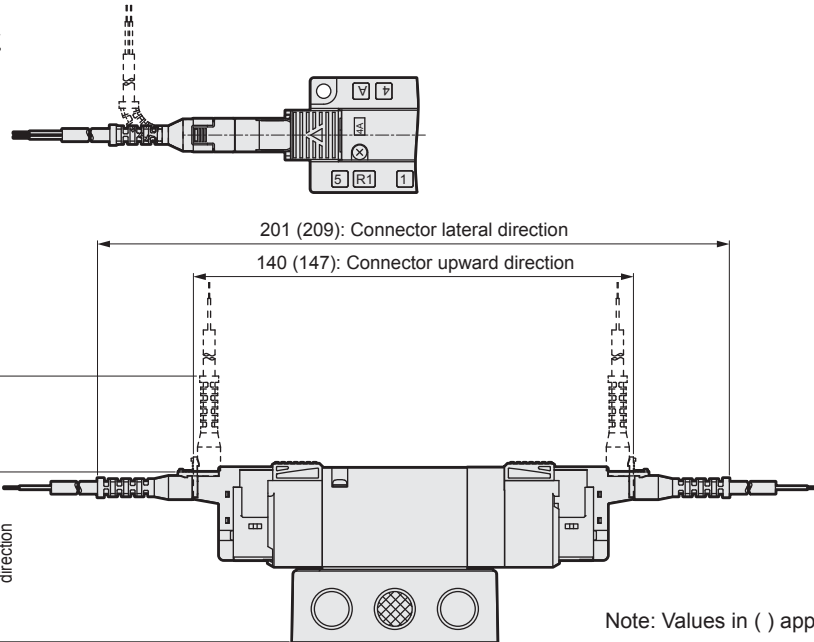
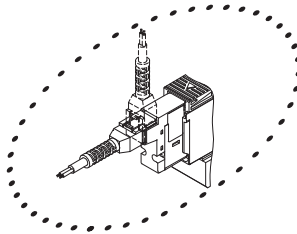
Dimensions

● E type connector type (E)



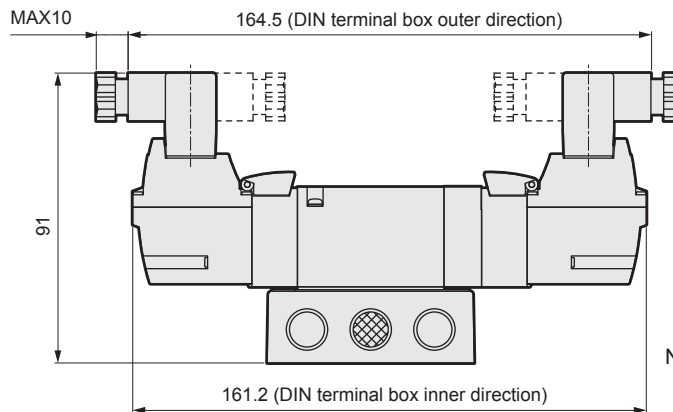
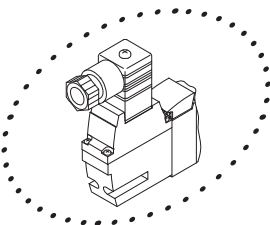
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

4GE3 Series

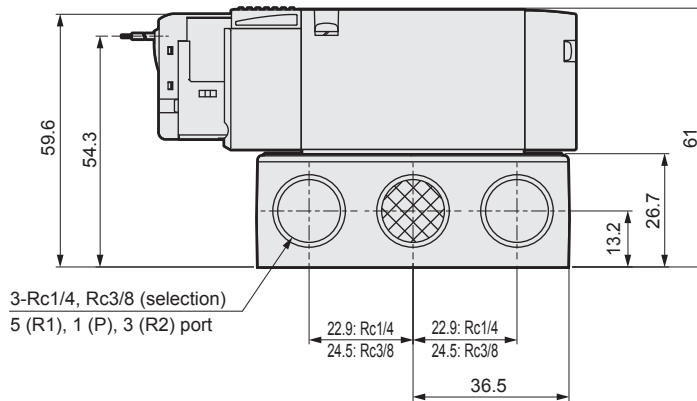
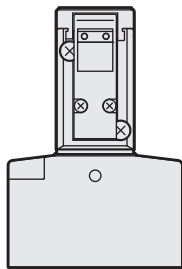
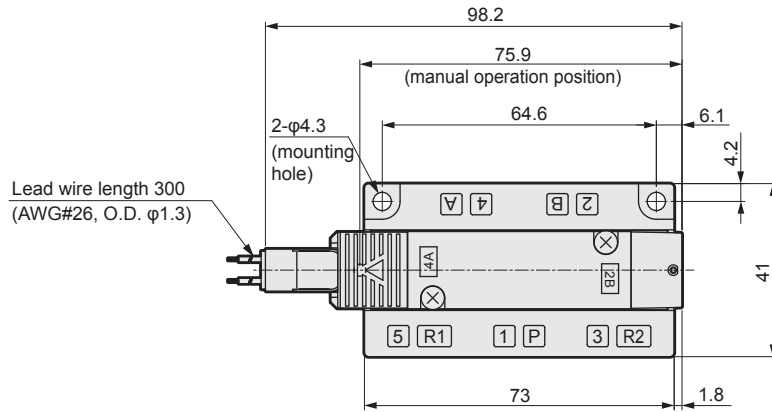
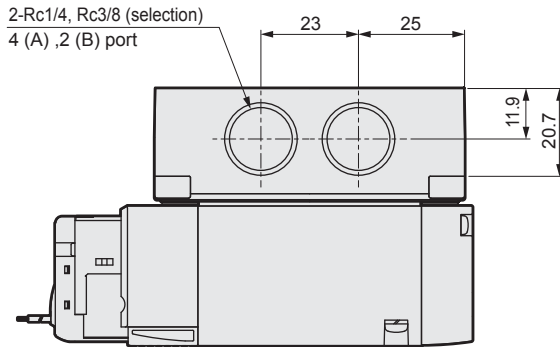
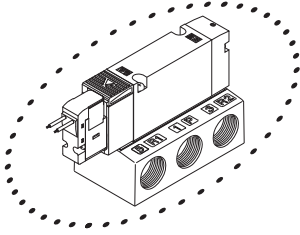
Discrete valve; base piping

Dimensions



4GE310R

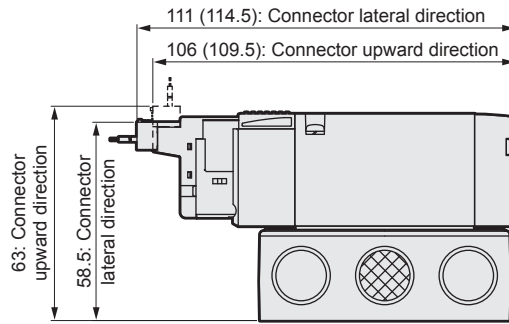
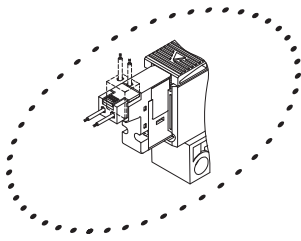
● 2-position single Grommet lead wire (blank)



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

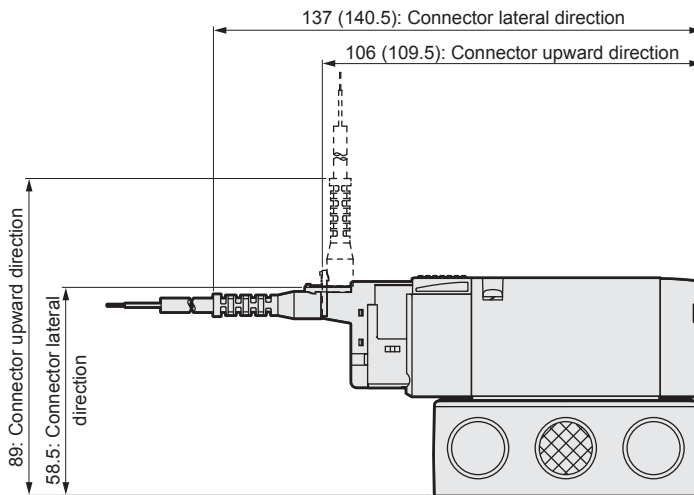
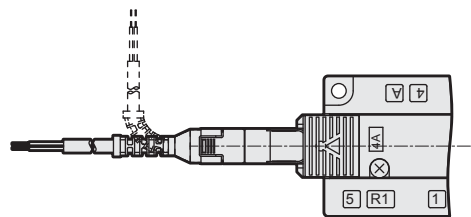
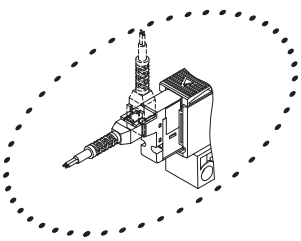
Dimensions

● E type connector type (E)



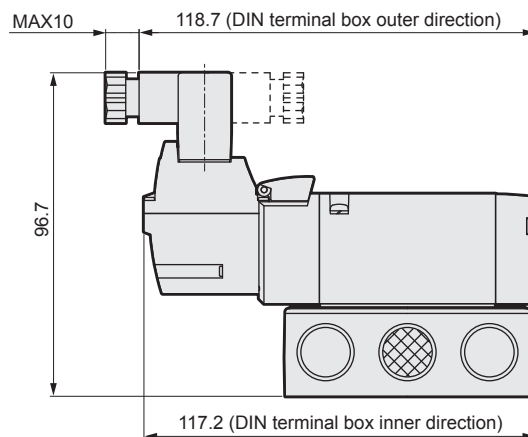
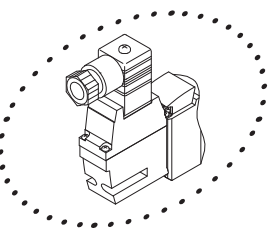
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

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4GE3 Series

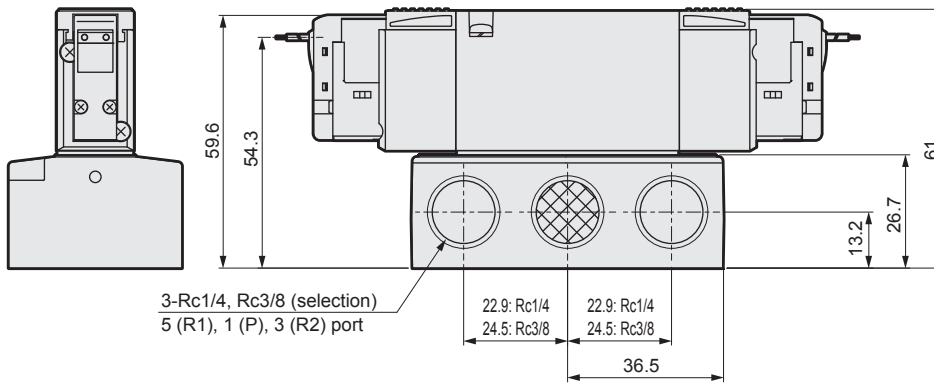
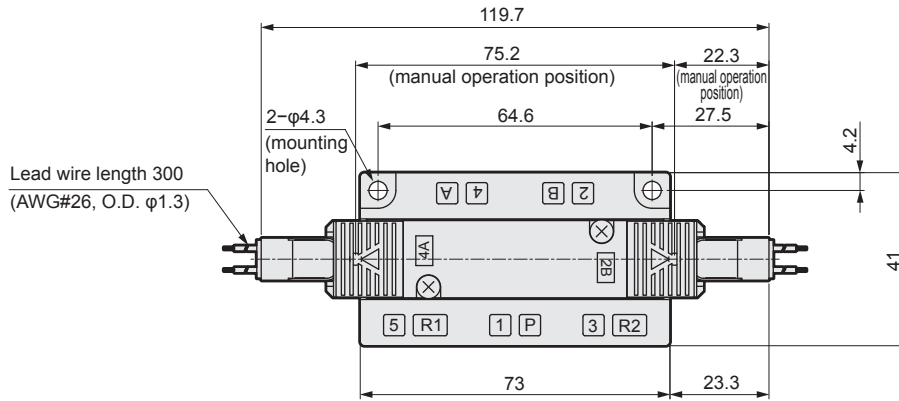
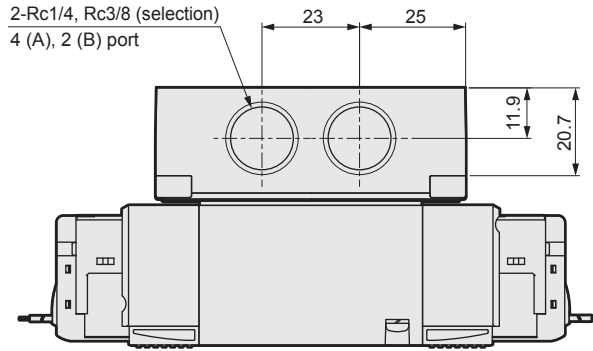
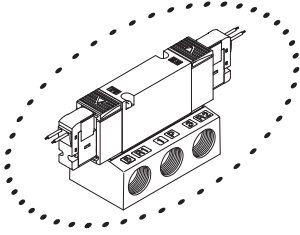
Discrete valve; base piping

Dimensions



4GE320R

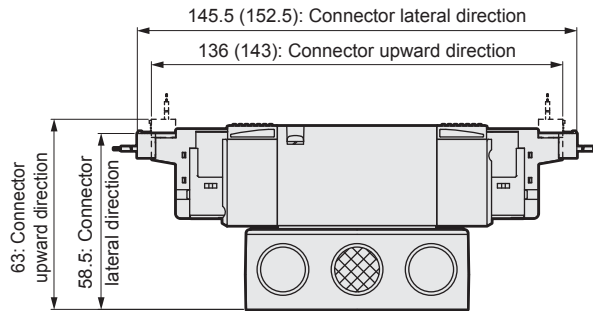
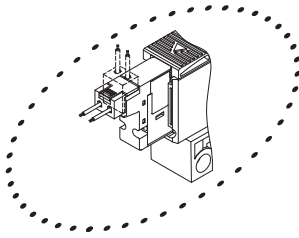
● 2-position double Grommet lead wire (blank)



4GAB
M4GAB
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4GAB Master valve
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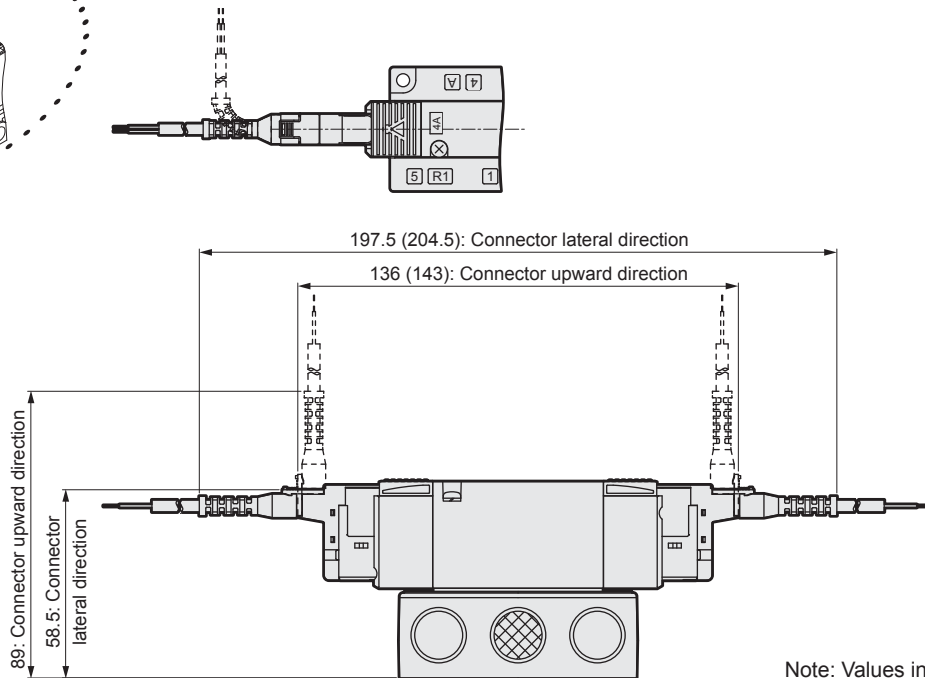
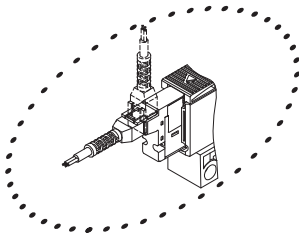
Dimensions

● E type connector type (E)



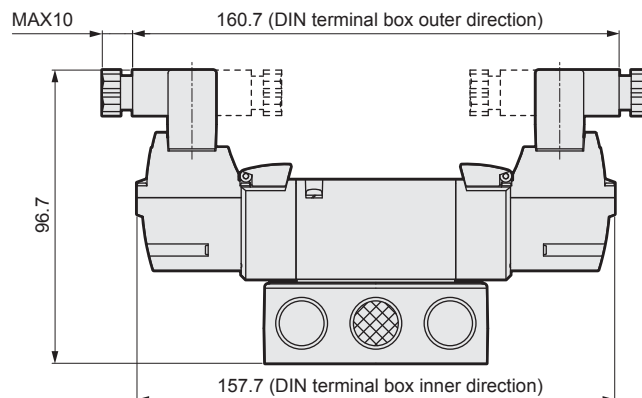
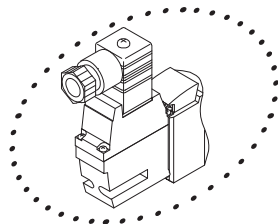
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

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4GE3 Series

Discrete valve; base piping

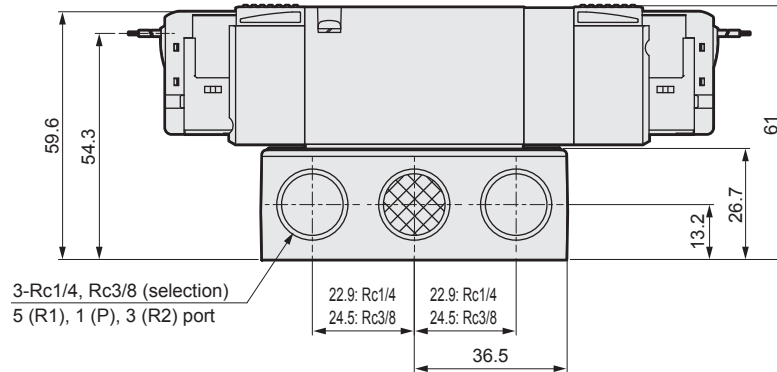
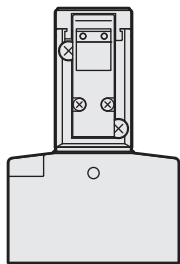
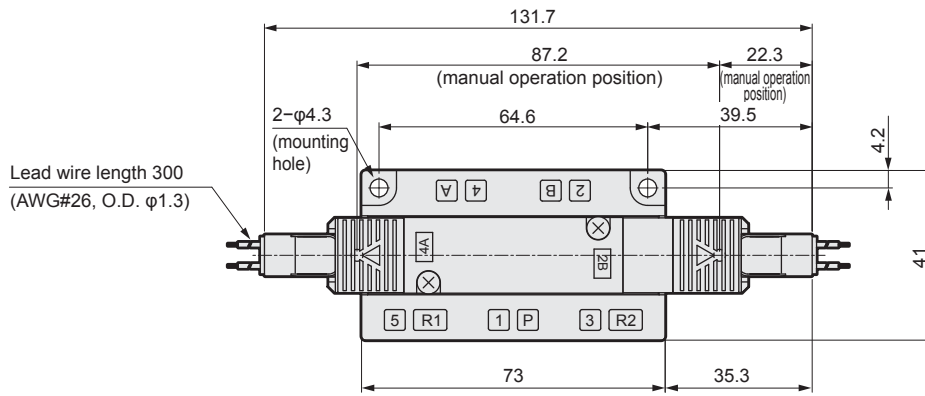
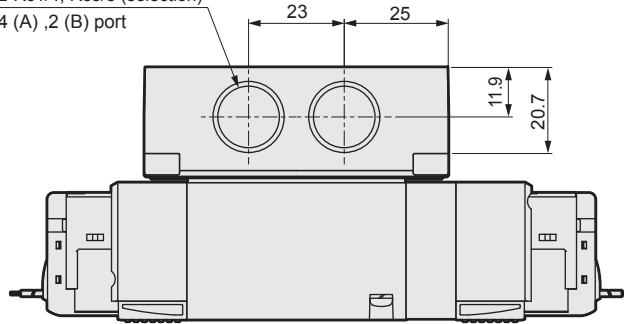
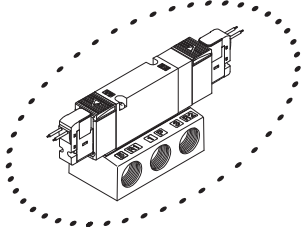
Dimensions



4GE3 0R

● 3-position Grommet lead wire (blank)

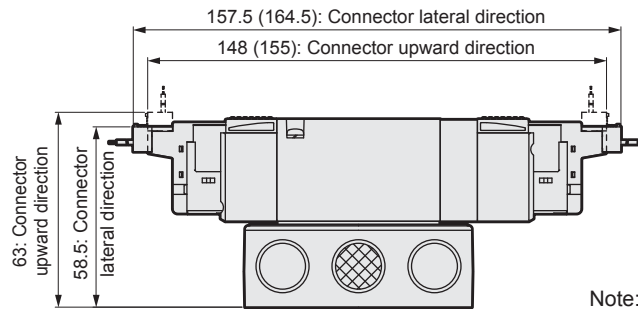
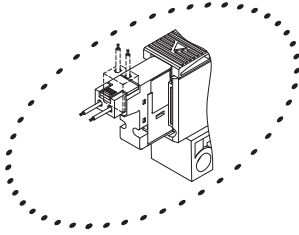
2-Rc1/4, Rc3/8 (selection)
4 (A), 2 (B) port



- 4GAB
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- 4GAB Master valve
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- MN4GD/E
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- Safety precautions
- Manifold Specifications

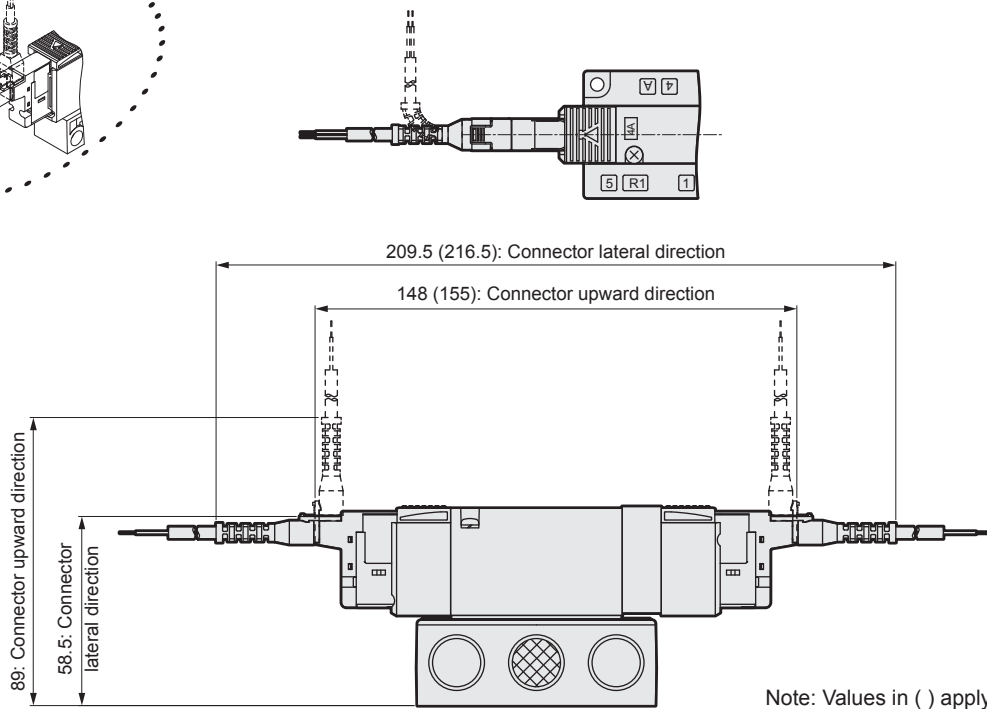
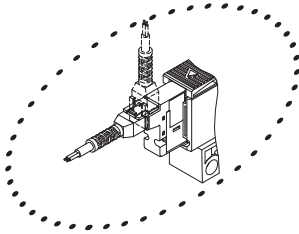
Dimensions

● E type connector type (E)



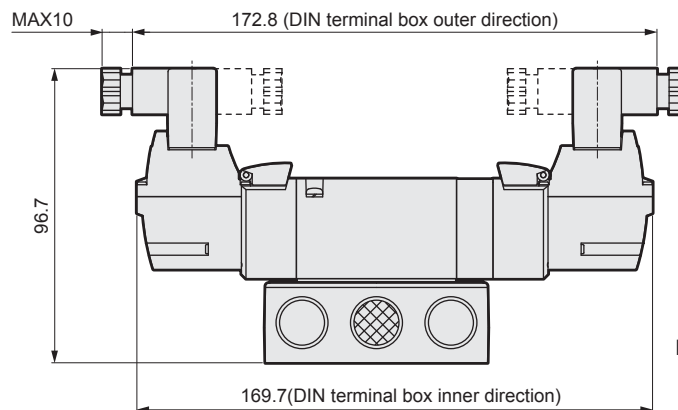
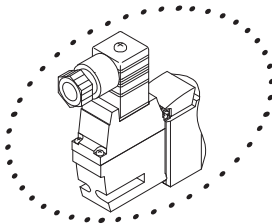
Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



Note: The DIN terminal box assembly is shipped facing inward.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

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