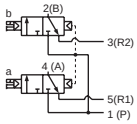
Individual wiring manifold
Body piping
Direct mount

M3GD1/2EA/M4GD1/2/3 /4EA Series

● Applicable cylinder bore size: ø20 to ø140

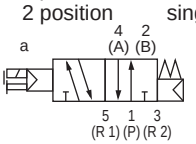
JIS symbol

● Two 3-port valves integrated
(A sideValve: NC, B sideValve: NC)

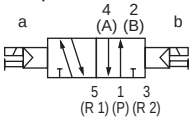


● 5-port valve

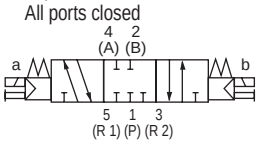
2 position single



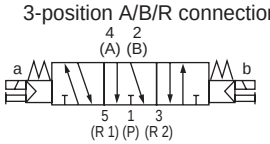
2-position double



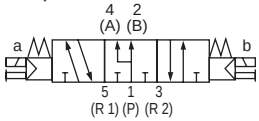
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item		Description
Manifold		Integrated base
Mounting method		Direct mount
Air supply and exhaust method		Common supply/common exhaust
Pilot exhaust method	Internal pilot	Main valve/pilot valve common exhaust(Standard) (Pilot exhaust check valve built-in)
Piping direction		Valve top direction
Valve and operation		Pilot operated soft spool valve
Working fluid		Compressed air
Max. working pressure MPa		0.7
Min. working pressure MPa		0.2
Proof pressure MPa		1.05
Ambient temperature °C		-5 to 55 (no freezing)
Fluid temperature °C		5 to 55
Manual override		Non-locking/locking common
Lubrication *1		Not required
Degree of protection *2		IP67
ResistanceVibration m/s^2		50 or less
ResistanceImpact m/s^2		300 or less
Atmosphere		Cannot be used in corrosive gas environments

*1 Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.

*2 Tested according to the test method for IP67 (IEC60529) standards. Note that while the unit is protected from dust and water, it cannot be used immersed in water. Countermeasures such as covering the unit should also be taken if using in environments where it will be constantly exposed to dust or water.

SolenoidSpecifications

Item		Content	Volume
Rated voltage	V	DC12	
Voltage fluctuation range		+10% -20%	
Rated current	A	0.05	
Power consumption	W	0.6	
Thermal class		B	

Individual specifications

Port size	M3GD1/M4GD1	M3GD2/M4GD2	M4GD3	M4GD4
Max. station No.	20 stations	20 stations	20 stations	15 stations
2/4-port (port A/B)	Push-in fitting ø4,ø6 M5	Push-in fitting ø4,ø6,ø8 G1/8	Push-in fitting ø6,ø8,ø10 G1/4	Push-in fitting ø8,ø10,ø12 G3/8
1, 3, 5-port (Port P/R1/R2)	G1/8	G1/4	G3/8	G1/2
Manifold base Weight calculation formula (n: station No.) g	23n+52	47n+64	74n+88	150n+199

For 10 or more manifold station No. (5 stations for 4G3 and 4G4), use ports on both sides for air supply and exhaust. The manifold base weight is the value for screw specifications.

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B → R1/R2			
			C[dm³/(s·bar)]	b	C[dm³/(s·bar)]		b	
M3GD1 M4GD1	Two 3-port valves integrated		0.86	0.31	1.1	(0.66)	0.19	(0.22)
	2-position		0.99	0.20	1.2	(0.70)	0.20	(0.12)
	3-position	All ports closed	0.94	0.23	1.1	-	0.20	-
		ABR connection	0.93	0.18	1.3	(0.70)	0.23	(0.02)
		PAB connection	1.1	0.28	1.1	-	0.23	-
M3GD2 M4GD2	Two 3-port valves integrated		1.7	0.40	2.3	(1.7)	0.29	(0.32)
	2-position		2.3	0.36	2.9	(1.7)	0.24	(0.33)
	3-position	All ports closed	2.1	0.35	2.5	-	0.32	-
		ABR connection	2.2	0.37	2.9	(1.8)	0.32	(0.29)
		PAB connection	2.4	0.34	2.5	-	0.33	-
M4GD3	2-position		3.2	0.37	3.8	(2.5)	0.13	(0.28)
	3-position	All ports closed	2.9	0.35	3.3	-	0.35	-
		ABR connection	3.0	0.34	3.8	(2.6)	0.12	(0.27)
		PAB connection	3.3	0.30	3.3	-	0.32	-
M4GD4	2-position		7.3	0.12	9.0	-	0.17	-
	3-position	All ports closed	6.4	0.15	8.2	-	0.22	-
		ABR connection	6.3	0.33	8.9	-	0.26	-
		PAB connection	8.0	0.08	8.3	-	0.22	-

*1: Effective cross-sectional area S and sonic conductance C use the conversion formula S ≈ 5.0 × C.
*2: Values in ( ) are with the exhaust check valve.

How to order

Manifold model No.

M 4GD1 1 0 EA - C4G RN H ( ) - 6 - 4

3-port manifold model No.

M 3GD1 66 0 EA - M5G RN H ( ) - 2 - 4

Discrete valve for integrated base

4GD1 1 9 EA - C6G RN H —— 4

3-port discrete valve for integrated base

3GD1 66 9 EA - M5G RN H —— 4

Ⓐ Model No.

Ⓑ Solenoid position

Ⓒ Explosion-proof Series

Ⓓ Port size

Ⓔ Electrical connections

Ⓕ Option

Ⓖ Mount type

Ⓗ Station No.

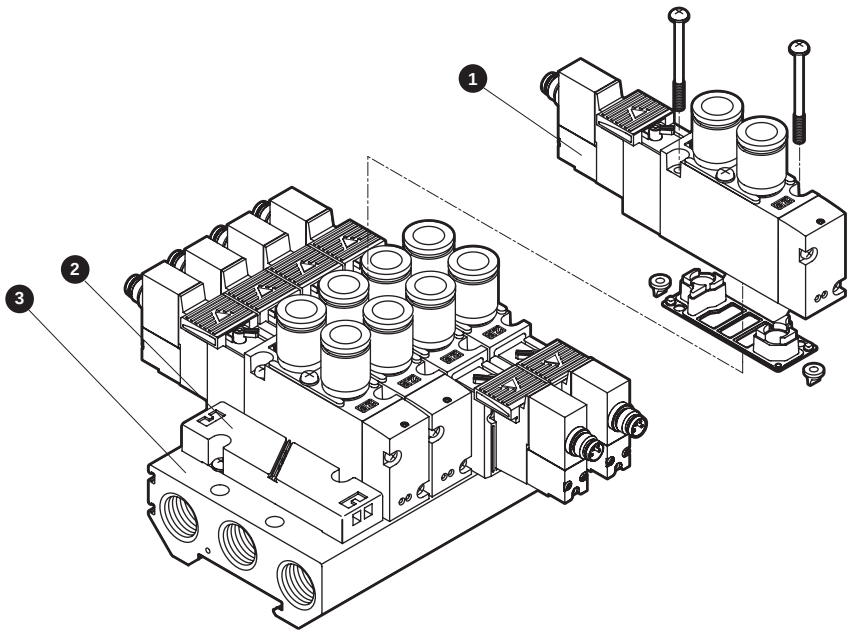
Ⓘ Voltage

Code	Description	Ⓐ Model No. 3GD1	3GD2	4GD1	4GD2	4GD3	4GD4
Ⓑ Solenoid position							
1	2-position single			●	●	●	●
2	2-position double			●	●	●	●
3	3-position all ports closed			●	●	●	●
4	3-position ABR connection			●	●	●	●
5	3-position PAB connection			●	●	●	●
66	3-port valve Two valves integrated *1/2 — A valve side: Normally closed	●	●				
	3-port valve Two valves integrated *1/2 — B valve side: Normally closed	●	●				
8	Mix manifold (when there are multiple solenoid positions)	●	●	●	●	●	●
Ⓒ Explosion-proof Series							
EA	ATEX Directive compliant product	●	●	●	●	●	●
Ⓓ Port size {2(B), 4(A) port}							
Port	4(A)/2(B) port	Port P/R1/R2 (2)=G1/8 (3)=G1/4 (4)=G3/8 (1/2) = G1/4					
C4G	ø4 push-in fitting	(2)	(3)	(2)	(3)		
C6G	ø6 push-in fitting	(2)	(3)	(2)	(3)	(4)	
C8G	ø8 push-in fitting		(3)		(3)	(4)	(5)
C10G	ø10 push-in fitting					(4)	(5)
C12G	ø12 push-in fitting						(5)
CX	Push-in fitting mix *3	(2)	(3)	(2)	(3)	(4)	(5)
M5G	M5	(2)		(2)			
06G	G1/8		(3)		(3)		
08G	G1/4					(4)	
10G	G3/8						(5)
Ⓔ Electrical connections							
RN	M8 connector without cable	●	●	●	●	●	●
R 1	M8 connector Straight cable *4	●	●	●	●	●	●
R 2	M8 connector L-type cable *4	●	●	●	●	●	●
Ⓕ Option							
Blank	Manual override of non-locking/locking common (standard)	●	●	●	●	●	●
H	With exhaust check valve *5,*7	●	●	●	●	●	
F	Port A/B filter *6	●	●	●	●	●	●
Z1	Air supply spacer *7,*8	●	●	●	●	●	
Z3	Exhaust spacer *7,*8	●	●	●	●	●	
Ⓖ Mount type							
Blank	Direct mount	●	●	●	●	●	●
Ⓗ Station No.							
2 to 20	2 stations to 20 stations(Refer to page 41 for the max. station number)	●	●	●	●	●	2 to 15
Ⓘ Voltage							
4	12 VDC	●	●	●	●	●	●

⚠ Precautions for model No. selection

*1 M4G for a mixture of 3, 5-port valvesD*80 EA. M3GD for a mix with the masking plate*80 EA.
*2 Dimensions are the same as the respective 2-position double solenoid.
*3 The push-in fitting cannot be mixed with the single valve's 4(A) or 2(B) port.
*4 M8 connector length is 300mm. Select other lengths from page 63 as needed.
*5 The 3-position all ports closed and PAB connection are not provided with exhaust check specifications (H). Refer to page 76 for details on the exhaust check valve.
*6 A filter is built into port P as standard.
*7 4G4 cannot be selected for exhaust check valves (H), air supply spacers (Z1), or exhaust spacers (Z3).
*8 Specify the spacer mounting position/quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Refer to pages 58 to 61 for details.
*9 Explosion-proof barrier sold separately. Select from page 67.

Manifold configuration explanation and parts list



Main configuration parts list

Part number	Configuration parts name		Model No.	Description	Remarks
1	Discrete valve for integrated base		4GD□□9EA- Port size - Electric wire Connection Option Voltage Solenoid position Series flow rate size	Discrete valve Gasket Mounting screws 2 (PR check valve 2)	Details on page 43
2	Masking plate	3G1/4G1	4G1R-MP	Masking plate Gasket Mounting screws 2	*Two PR check valves are attached with 4G3/4G4.
		3G2/4G2	4G2R-MP		
		4G3	4G3R-MP		
		4G4	4GA4-MP		
3	Manifold base assembly		M4GD□R00G- Option Station No. Series flow rate size	Manifold base	

Parts list

Part number	Part name	Model No.
-	M8 connector cable	4GEX-M8CC- Direction - Length *Details on page 63
-	Explosion-proof barrier	Details on pages 67 to 69

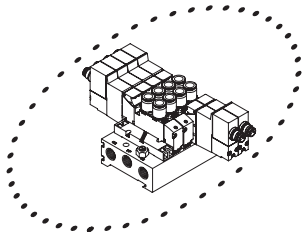
Part number	Part name			Model No.
-	Cartridge push-in fitting and related parts	4G1	ø4 straight	4G1R-JOINT-C4
			ø6 straight	4G1R-JOINT-C6
		4G2	ø4 straight	4G2R-JOINT-C4
			ø6 straight	4G2R-JOINT-C6
			ø8 straight	4G2R-JOINT-C8
		4G3	ø6 straight	4G3R-JOINT-C6
			ø8 straight	4G3R-JOINT-C8
			ø10 straight	4G3R-JOINT-C10
		4G4	ø8 straight	4G4-JOINT-C8
			ø10 straight	4G4-JOINT-C10
			ø12 straight	4G4-JOINT-C12

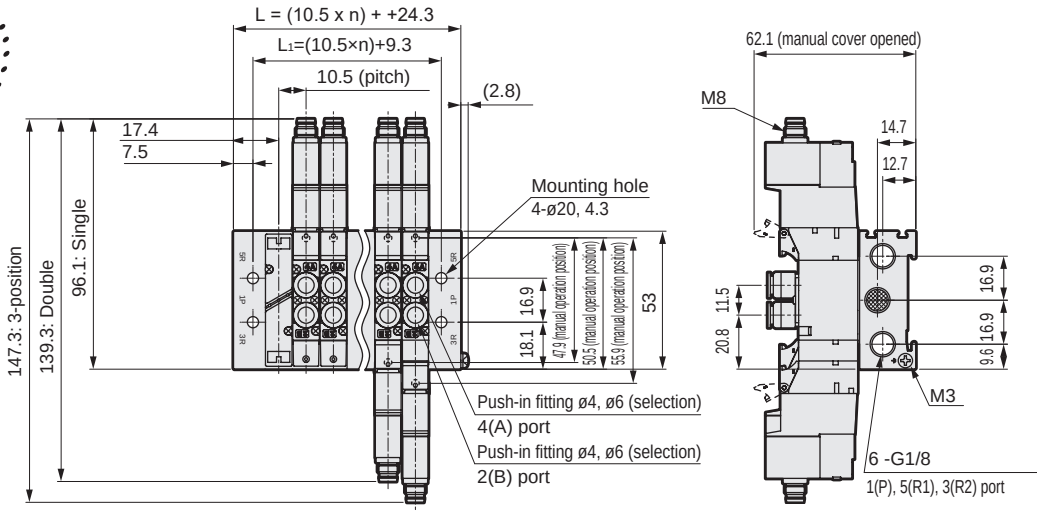
Dimensions

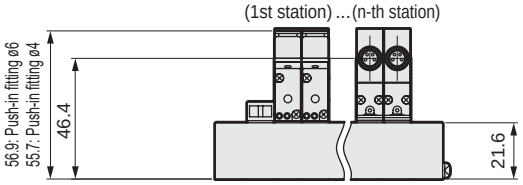
M4GD1*0EA

*The two 3-port valve built-in type has the same dimensions as the double model.

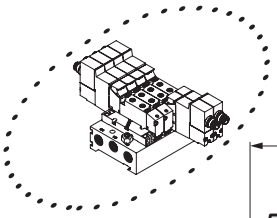
● Without connector (RN)

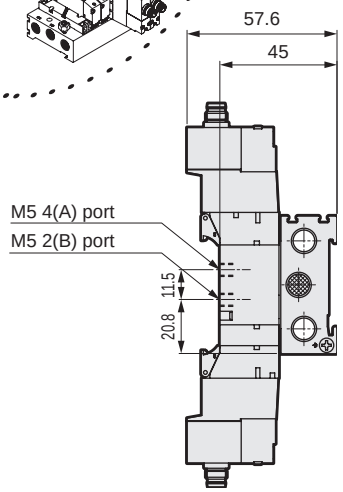




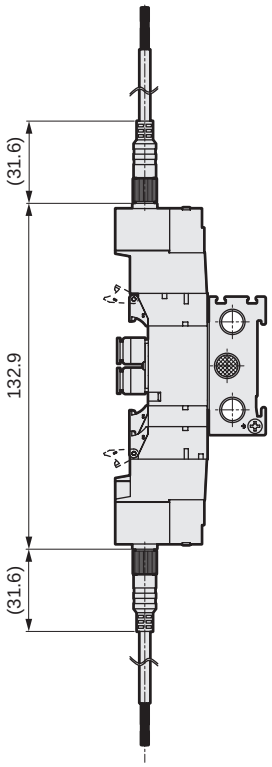


● M5 female thread (M5G)

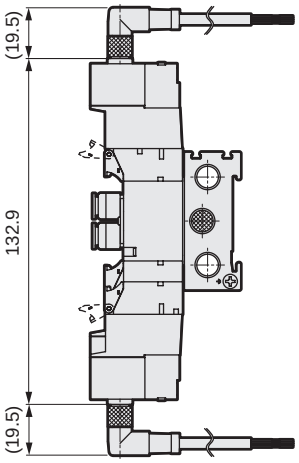




● M8 connector/straight cable (R1)



● M8 connector/L-type cable (R2)



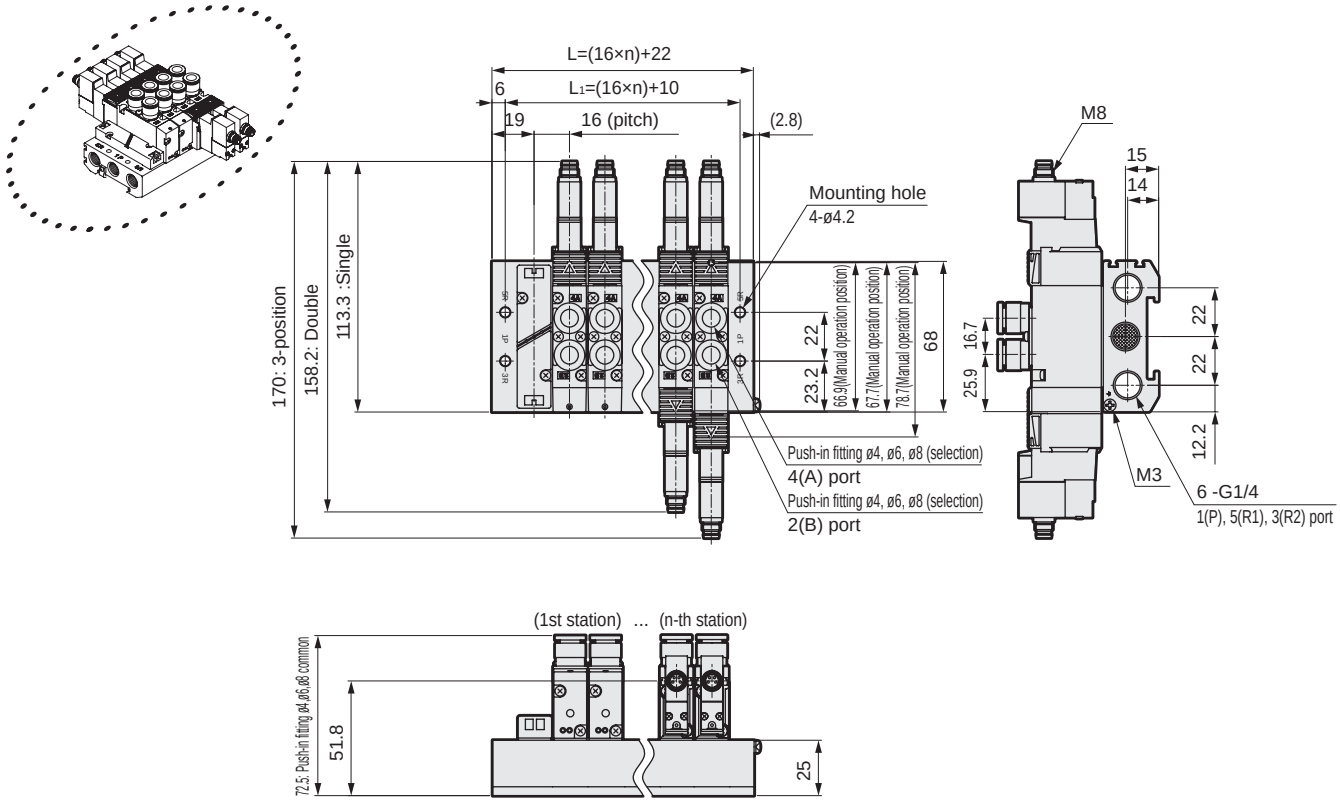
Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	45.3	55.8	66.3	76.8	87.3	97.8	108.3	118.8	129.3	139.8	150.3	160.8	171.3	181.8	192.3	202.8	213.3	223.8	234.3
L_1	30.3	40.8	51.3	61.8	72.3	82.8	93.3	103.8	114.3	124.8	135.3	145.8	156.3	166.8	177.3	187.8	198.3	208.8	219.3

Dimensions

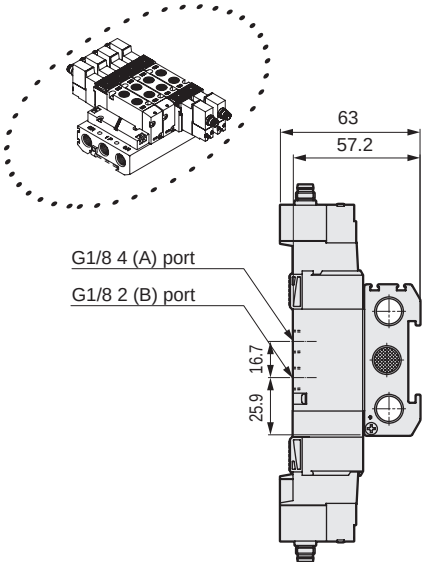
M4GD2*0EA

● Without connector (RN)

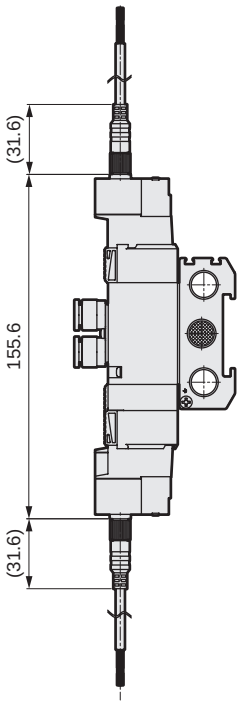
*The two 3-port valve built-in type has the same dimensions as the double model.



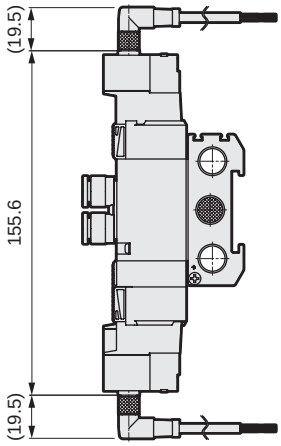
● G1/8 female thread (06G)



● M8 connector/straight cable (R1)



● M8 connector/L-type cable (R2)

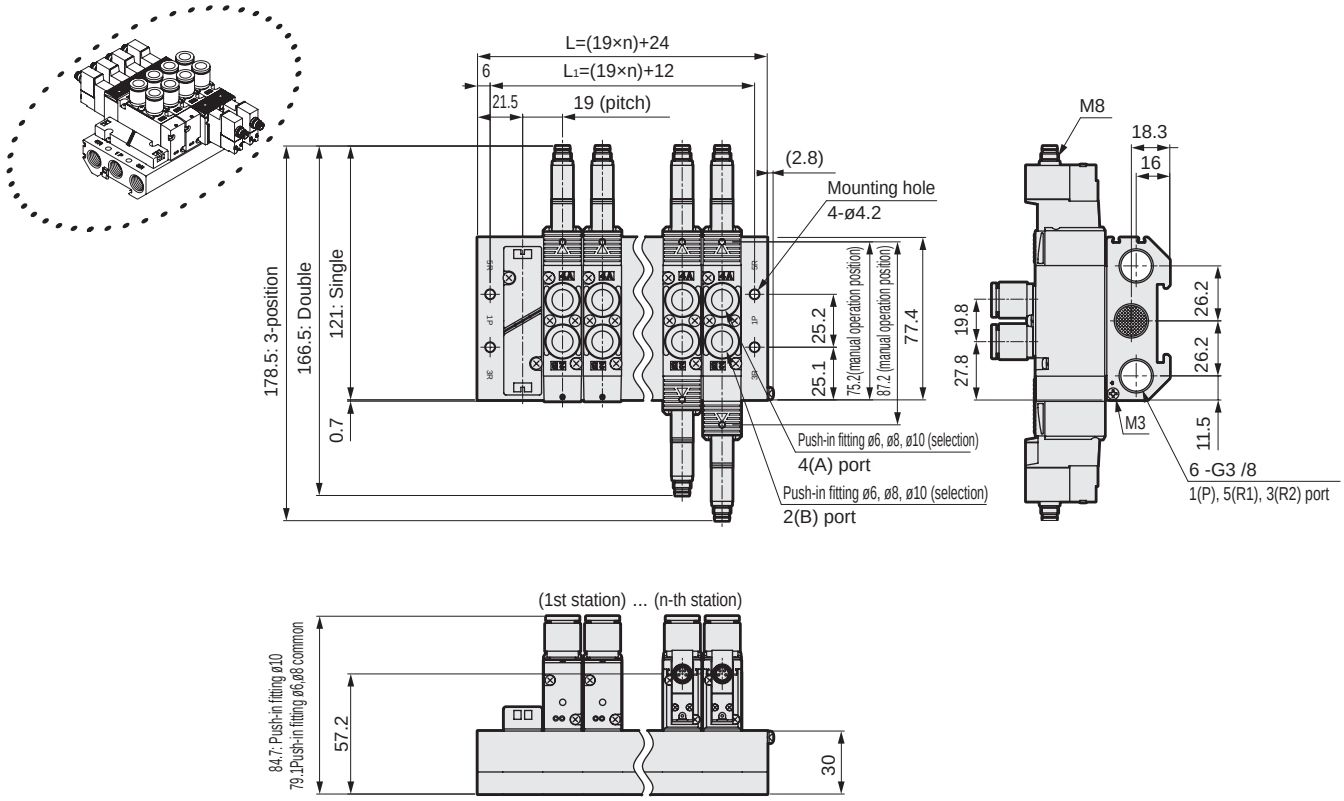


Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	54.0	70.0	86.0	102.0	118.0	134.0	150.0	166.0	182.0	198.0	214.0	230.0	246.0	262.0	278.0	294.0	310.0	326.0	342.0
L1	42.0	58.0	74.0	90.0	106.0	122.0	138.0	154.0	170.0	186.0	202.0	218.0	234.0	250.0	266.0	282.0	298.0	314.0	330.0

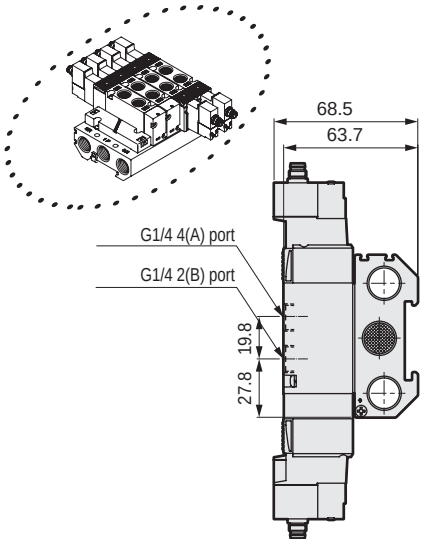
Dimensions

M4GD3*0EA

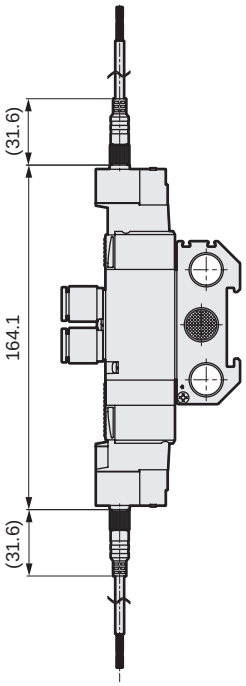
● Without connector (RN)



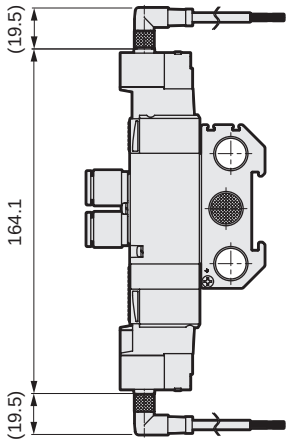
● G1/4 female thread (08G)



● M8 connector/straight cable (R1)



● M8 connector/L-type cable (R2)

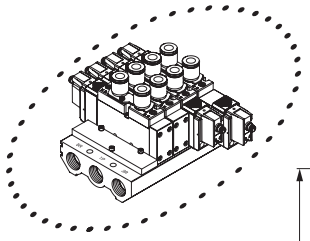


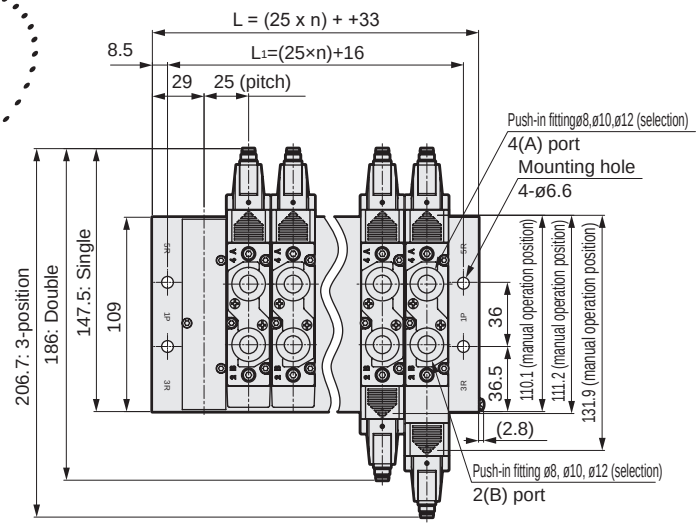
Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	62.0	81.0	100.0	119.0	138.0	157.0	176.0	195.0	214.0	233.0	252.0	271.0	290.0	309.0	328.0	347.0	366.0	385.0	404.0
L1	50.0	69.0	88.0	107.0	126.0	145.0	164.0	183.0	202.0	221.0	240.0	259.0	278.0	297.0	316.0	335.0	354.0	373.0	392.0

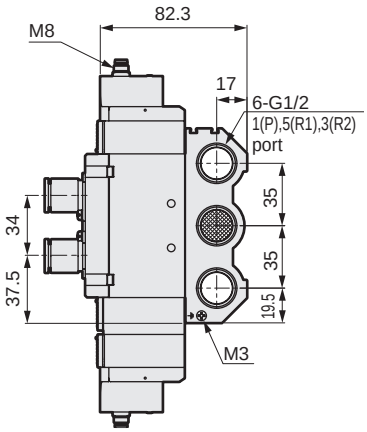
Dimensions

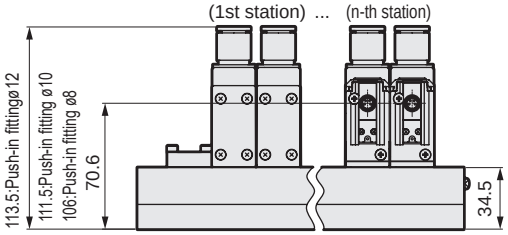
M4GD4*0EA

● Without connector (RN)

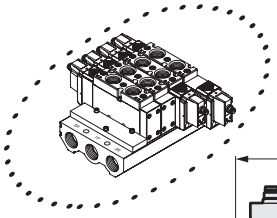


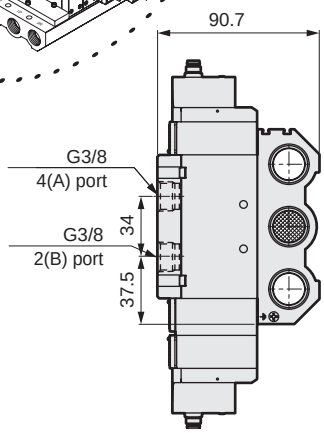




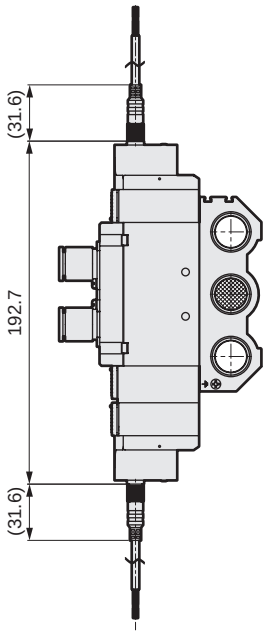


● G3/8 female thread (10G)

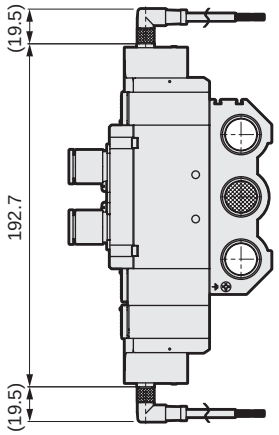




● M8 connector/straight cable (R1)



● M8 connector/L-type cable (R2)



Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15
L	83	108	133	158	183	208	233	258	283	308	333	358	383	408
L_1	66	91	116	141	166	191	216	241	266	291	316	341	366	391

Individual wiring manifold
Base piping
Direct mount

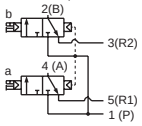
M3GE1/2EA / M4GE1/2/3 /4EA Series

● Applicable cylinder bore size: ø20 to ø140

CE RoHS CAD

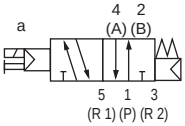
JIS symbol

● Two 3-port valves integrated
(A side valve: NCB side valve: NC)

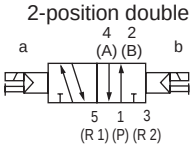


● 5-port valve

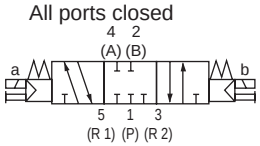
2 position single



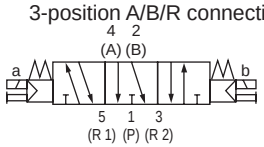
2-position double



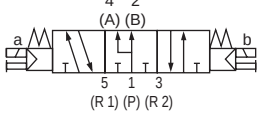
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item		Description
Manifold		Integrated base
Mounting method		Direct mount
Air supply and exhaust method		Common supply/common exhaust
Pilot exhaust method	Internal pilot	Main valve/pilot valve common exhaust (Standard) (Pilot exhaust check valve built-in)
Piping direction		Side direction of base
Valve and operation		Pilot operated soft spool valve
Working fluid		Compressed air
Max. working pressure MPa		0.7
Min. working pressure MPa		0.2
Proof pressure MPa		1.05
Ambient temperature °C		-5 to 55 (no freezing)
Fluid temperature °C		5 to 55
Manual override		Non-locking/locking common
Lubrication *1		Not required
Degree of protection *2		IP67
Vibration resistance m/s^2		50 or less
Shock resistance m/s^2		300 or less
Atmosphere		Cannot be used in corrosive gas environments

*1 Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.

*2 Tested according to the test method for IP67 (IEC60529) standards. Note that while the unit is protected from dust and water, it cannot be used immersed in water. Countermeasures such as covering the unit should also be taken if using in environments where it will be constantly exposed to dust or water.

SolenoidSpecifications

Item		Content Volume
Rated voltage	V	DC12
Voltage fluctuation range		+10% -20%
Holding current	A	0.05
Power consumption	W	0.6
Thermal class		B

Individual specifications

Port size	M3GE1/M4GE1	M3GE2/M4GE2	M4GE3	M4GE4	
				G1/4 G3/8	G1/2
Max. station No.	20 stations	20 stations	20 stations	15 stations	12 stations
2/4-port (Port A/B)	Push-in fitting ø4,ø6 M5	Push-in fitting ø4,ø6,ø8 G1/8	Push-in fitting ø6,ø8,ø10 G1/4	Push-in fitting ø8,ø10,ø12 G1/4,G3/8	G1/2
1, 3, 5-port (Port P/R1/R2)	G1/8	G1/4	G3/8	G3/8	G1/2
Manifold base Weight calculation formula (n: station No.) g	35n+61	71n+106	113n+170	273n+329	391n+560

For 10 or more manifold station No. (5 stations for 4G3 and 4G4), use ports on both sides for air supply and exhaust. The manifold base weight is the value for screw specifications.

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B → R1/R2			
			C[dm³/(s·bar)]	b	C[dm³/(s·bar)]		b	
M3GE1 M4GE1	Two 3-port valves integrated		0.86	0.35	1.1	(0.67)	0.22	(0.23)
	2-position		1.1	0.22	1.2	(0.70)	0.20	(0.10)
	3-position	All ports closed	0.98	0.22	1.1	-	0.24	-
		ABR connection	0.97	0.35	1.3	(0.68)	0.22	(0.24)
		PAB connection	1.1	0.38	1.1	-	0.21	-
M3GE2 M4GE2	Two 3-port valves integrated		1.7	0.44	2.1	(1.6)	0.32	(0.30)
	2-position		2.4	0.34	2.7	(1.7)	0.24	(0.31)
	3-position	All ports closed	2.2	0.34	2.4	-	0.29	-
		ABR connection	2.2	0.34	2.8	(1.8)	0.24	(0.27)
		PAB connection	2.4	0.29	2.4	-	0.29	-
M4GE3	2-position		3.5	0.34	3.8	(2.6)	0.11	(0.27)
	3-position	All ports closed	3.1	0.33	3.3	-	0.22	-
		ABR connection	3.0	0.30	3.8	(2.7)	0.11	(0.22)
		PAB connection	3.6	0.36	3.3	-	0.28	-
M4GE4 1-port size G3/8	2-position		6.4	0.42	6.9	-	0.12	-
	3-position	All ports closed	6.0	0.37	6.8	-	0.12	-
		ABR connection	6.0	0.31	7.1	-	0.11	-
		PAB connection	6.0	0.37	6.8	-	0.13	-
M4GE4 1-port size G1/2	2-position		8.3	0.23	9.0	-	0.21	-
	3-position	All ports closed	7.4	0.15	8.8	-	0.19	-
		ABR connection	7.5	0.28	9.4	-	0.17	-
		PAB connection	7.7	0.21	8.7	-	0.18	-

*1: Effective cross-sectional area S and sonic conductance C use the conversion formula S ≈ 5.0 × C.
*2: Values in ( ) are with the exhaust check valve.

M3GE1/2/M4GE1/2/3 /4*0EA Series

Individual wiring manifold; BasePiping

How to order

Manifold model No.

M 4GE1 1 0 EA - C4G RN H ○ - 6 - 4

3-port manifold model No.

M 3GE1 66 0 EA - M5G RN H ○ - 2 - 4

Discrete valve for integrated base

4GE1 1 9 EA - 00 RN H — 4

3-port discrete valve for integrated base

3GE1 66 9 EA - 00 RN H — 4

Ⓐ Model No.

Ⓑ Solenoid position

Ⓒ Explosion-proof Series

Ⓓ Port size

Ⓔ Electrical connections

Ⓕ Option

Ⓖ Mount type

Ⓗ Station No.

Ⓘ Voltage

Code	Description	Ⓐ Model No. 3GE1	3GE2	4GE1	4GE2	4GE3	4GE4
Ⓑ Solenoid position							
1	2 position single			●	●	●	●
2	2-position double			●	●	●	●
3	3-position all ports closed			●	●	●	●
4	3-position ABR connection			●	●	●	●
5	3-position PAB connection			●	●	●	●
66	3-port valve Two valves integrated *1 *2 — A valve side: Normally closed	●	●				
	3-port valve Two valves integrated *1 *2 — B valve side: Normally closed	●	●				
8	Mix manifold (when there are multiple solenoid positions)	●	●	●	●	●	●
Ⓒ Explosion-proof Series							
EA	ATEX Directive compliant product	●	●	●	●	●	●
Ⓓ Port size {2(B), 4(A) port}							
Port	4(A)/2(B) port	Port P/R1/R2 (2)=G1/8 (3)=G1/4 (4)=G3/8 (1/2) = G1/4					
C4G	ø4 push-in fitting	(2)	(3)	(2)	(3)		
C6G	ø6 push-in fitting	(2)	(3)	(2)	(3)	(4)	
C8G	ø8 push-in fitting		(3)		(3)	(4)	(4)
C10G	ø10 push-in fitting					(4)	(4)
C12G	ø12 push-in fitting						(4)
CXG	Push-in fitting mix	(2)	(3)	(2)	(3)	(4)	(4)
M5G	M5	(2)		(2)			
06G	G1/8		(3)		(3)		
08G	G1/4					(4)	(4)
10G	G3/8						(4)
15G	G1/2						(5)
00	Valve for base mounting	●	●	●	●	●	●
Ⓔ Electrical connections							
RN	M8 connector without cable	●	●	●	●	●	●
R 1	M8 connector Straight cable *3	●	●	●	●	●	●
R 2	M8 connector L-type cable *3	●	●	●	●	●	●
Ⓕ Option							
Blank	Manual override of non-locking/locking common (standard)	●	●	●	●	●	●
H	With exhaust check valve *4, *6	●	●	●	●	●	
F	Port A/B filter *5	●	●	●	●	●	●
Z1	Air supply spacer *6, *7	●	●	●	●	●	
Z3	Exhaust spacer *6, *7	●	●	●	●	●	
Ⓖ Mount type							
Blank	Direct mount *8	●	●	●	●	●	●
Ⓗ Station No.							*8
2 to 20	2 stations to 20 stations(Refer to page 49 for the max. station number)	●	●	●	●	●	2 to 15
Ⓘ Voltage							
4	12 VDC	●	●	●	●	●	●

⚠ Precautions for model No. selection

*1 M4GE*80EA when using a mixture of 3, 5-port valves. When using a mixture with the masking plate, M3GE*80EA.

*2 Dimensions are the same as the respective 2-position double solenoid.

*3 M8 connector length is 300mm. Select other lengths from page 63 as needed.

*4 3-position all ports closed and PAB connection are not provided with exhaust check valve specifications (H). Refer to page 76 for details on the exhaust check valve.

*5 A filter is built into port P as standard.

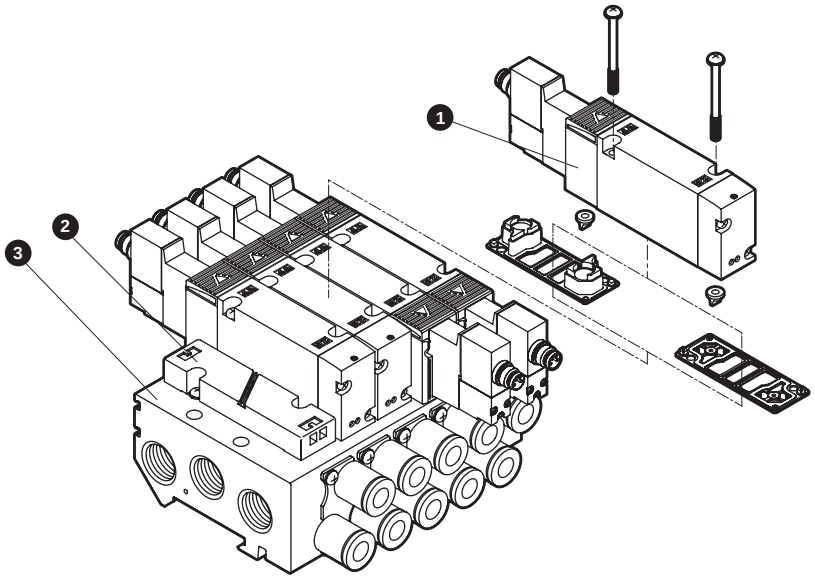
*6 4G4 cannot be selected for exhaust check valves (H), air supply spacers (Z1), or exhaust spacers (Z3).

*7 Specify the spacer mounting position/quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Refer to pages 58 to 61 for details.

*8 The manifold max. station No. for port size 12 M4GE4 is 12.

*9 Explosion-proof barrier sold separately. Select from page 67.

Manifold configuration explanation and parts list



Main configuration parts list

Part number	Configuration parts name		Model No.	Description	Remarks
1	Discrete valve for integrated base		4GE □□9EA - 00 - Electric wire Connection / Option - Voltage Solenoid position Series flow rate size	Discrete valve Gasket Mounting screws 2 (2 PR check valves)	Details on page 51
2	Masking plate	3G1/4G1	4G1R-MP	Masking plate Gasket Mounting screws 2	*Two PR check valves are attached with 4G3/4G4.
		3G2/4G2	4G2R-MP		
		4G3	4G3R-MP		
		4G4	4GB4-MP		
3	Manifold base assembly		M4GE □R - Connection Bore size - Option - Station No. Series flow rate size	Manifold base	

Parts list

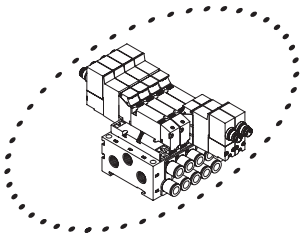
Part number	Part name	Model No.
-	M8 connector cable	4GEX-M8CC- Direction - Length * Details on page 63
-	Explosion-proof barrier	Details on pages 67 to 69

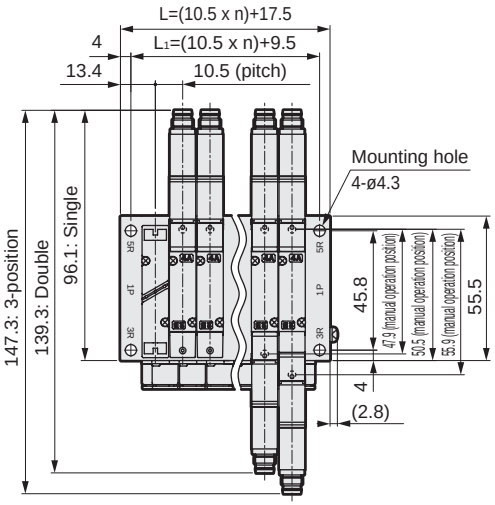
Part number	Part name			Model No.
-	Cartridge push-in fitting and related parts	4G1	ø4 straight	4G1R-JOINT-C4
			ø6 straight	4G1R-JOINT-C6
			Plug cartridge	4G1R-JOINT-CPG
		4G2	ø4 straight	4G2R-JOINT-C4
			ø6 straight	4G2R-JOINT-C6
			ø8 straight	4G2R-JOINT-C8
			Plug cartridge	4G2R-JOINT-CPG
		4G3	ø6 straight	4G3R-JOINT-C6
			ø8 straight	4G3R-JOINT-C8
			ø10 straight	4G3R-JOINT-C10
			Plug cartridge	4G3R-JOINT-CPG
		4G4	ø8 straight	4G4-JOINT-C8
			ø10 straight	4G4-JOINT-C10
			ø12 straight	4G4-JOINT-C12

Dimensions

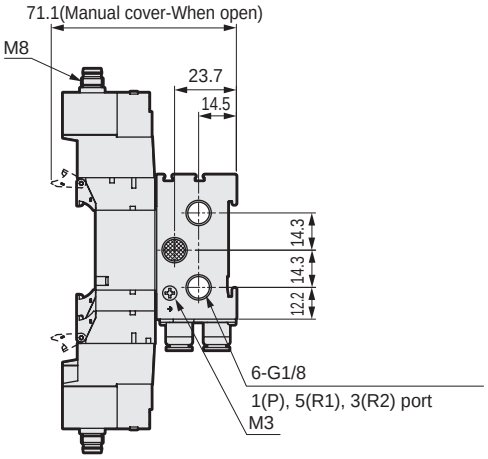
M4GE1*0EA

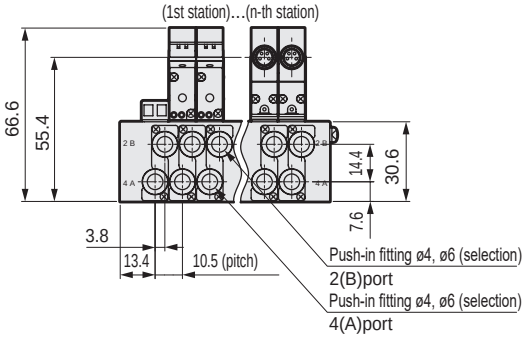
● Direct mount installation
Without connector (RN)



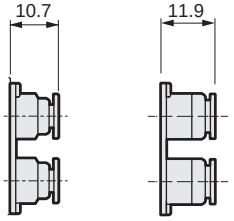


Note The two 3-port valve built-in type has the same dimensions as the double model.

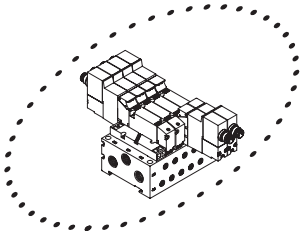


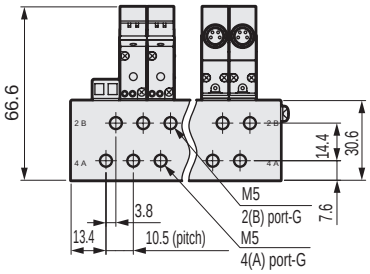


● ø4(C4) ● ø6(C6)

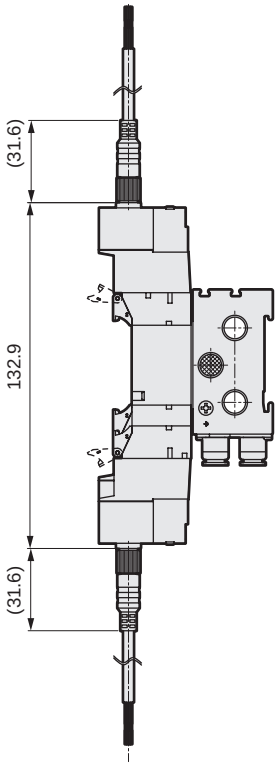


● M5 female thread (M5G)

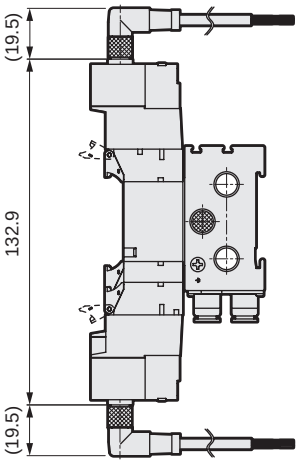




● M8 connector/straight cable (R1)



● M8 connector/L-type cable (R2)



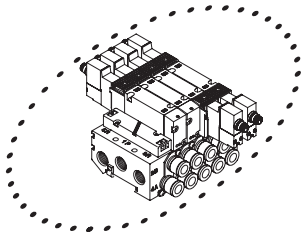
Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	38.5	49.0	59.5	70.0	80.5	91.0	101.5	112.0	122.5	133.0	143.5	154.0	164.5	175.0	185.5	196.0	206.5	217.0	227.5
L_1	30.5	41.0	51.5	62.0	72.5	83.0	93.5	104.0	114.5	125.0	135.5	146.0	156.5	167.0	177.5	188.0	198.5	209.0	219.5

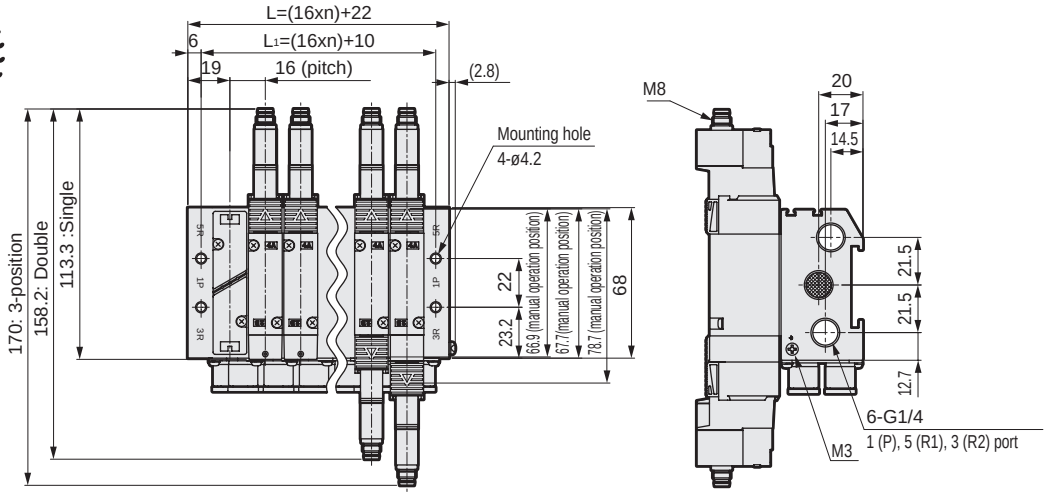
Dimensions

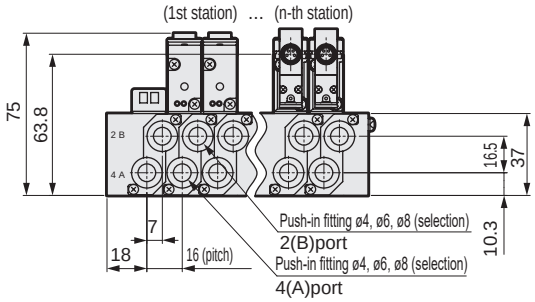
M4GE2*0EA

● Without connector (RN)

Note The two 3-port valve built-in type has the same dimensions as the double model.

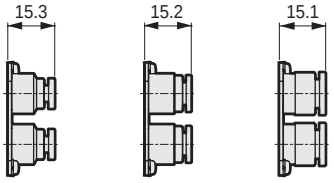




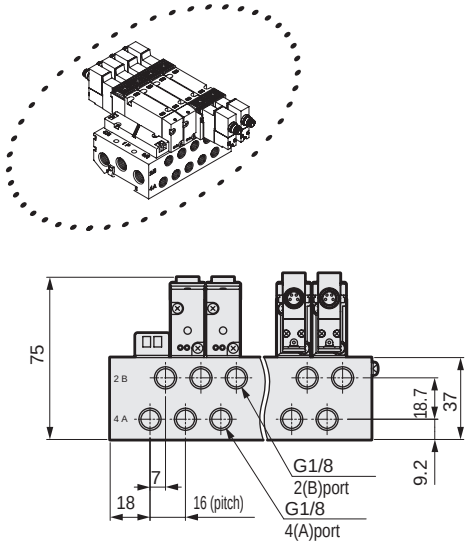


● Fitting straight

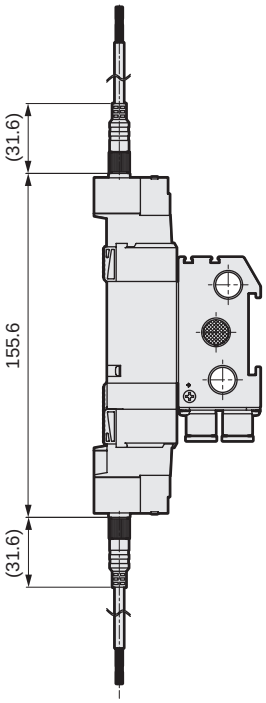
● ø4(C4) ● ø6(C6) ● ø8(C8)



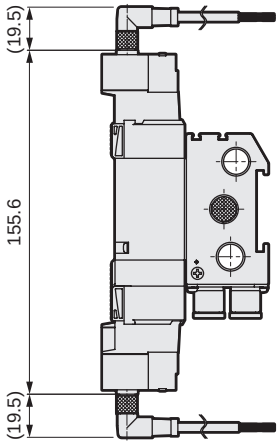
● G1/8 female thread (06G)



● M8 connector/straight cable (R1)



● M8 connector/L-type cable (R2)

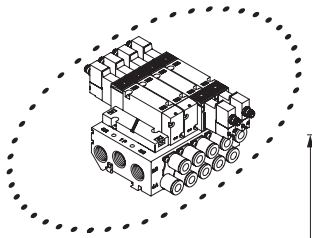


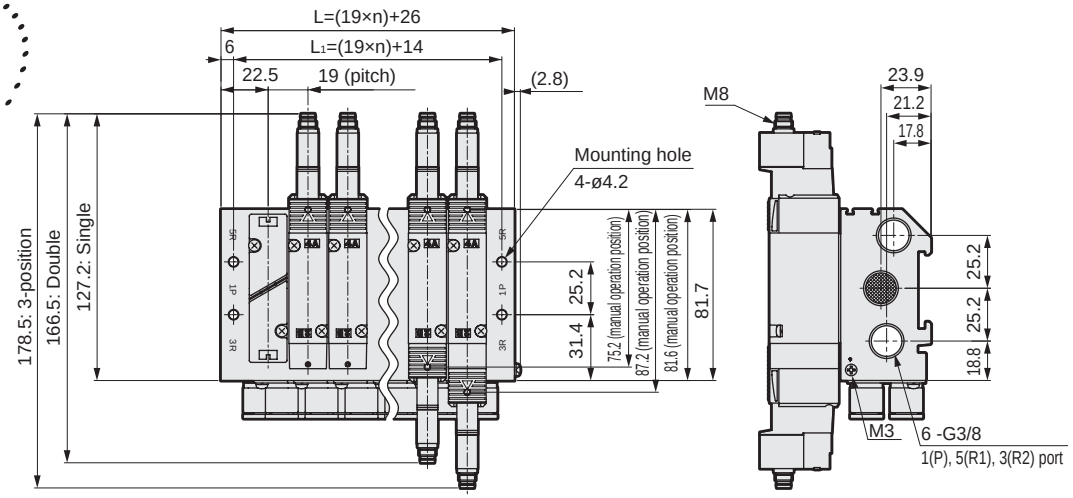
Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	54.0	70.0	86.0	102.0	118.0	134.0	150.0	166.0	182.0	198.0	214.0	230.0	246.0	262.0	278.0	294.0	310.0	326.0	342.0
L1	42.0	58.0	74.0	90.0	106.0	122.0	138.0	154.0	170.0	186.0	202.0	218.0	234.0	250.0	266.0	282.0	298.0	314.0	330.0

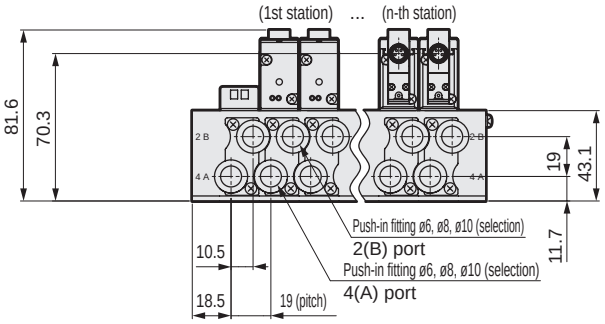
Dimensions

M4GE3*0EA

● Without connector (RN)

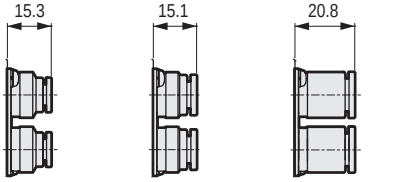




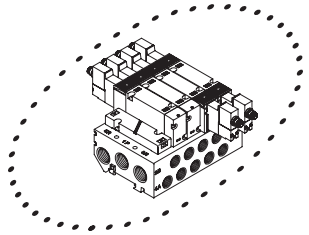


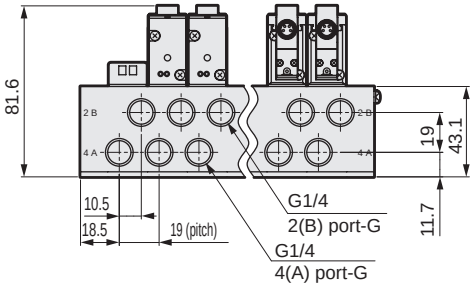
● Fitting straight

● ø6(C6) ● ø8(C8) ● ø10 (C10)

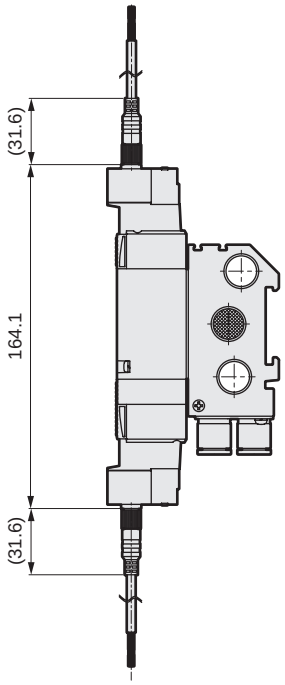


● G1/4 female thread (08G)

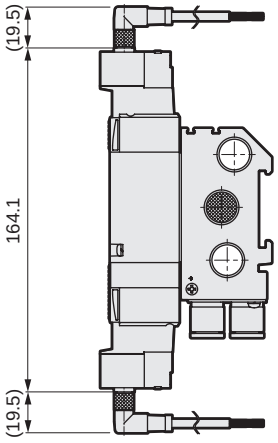




● M8 connector/straight cable (R1)



● M8 connector/L-type cable (R2)

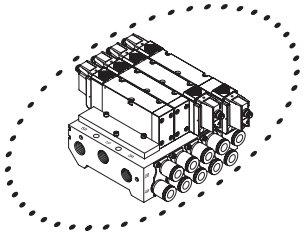


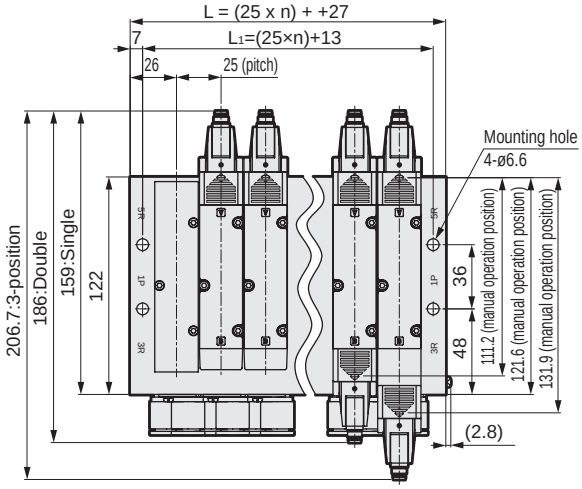
Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	64.0	83.0	102.0	121.0	140.0	159.0	178.0	197.0	216.0	235.0	254.0	273.0	292.0	311.0	330.0	349.0	368.0	387.0	406.0
L_1	52.0	71.0	90.0	109.0	128.0	147.0	166.0	185.0	204.0	223.0	242.0	261.0	280.0	299.0	318.0	337.0	356.0	375.0	394.0

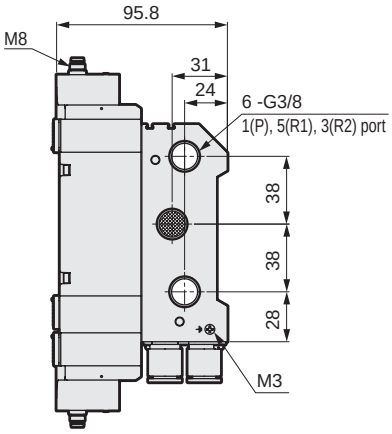
Dimensions

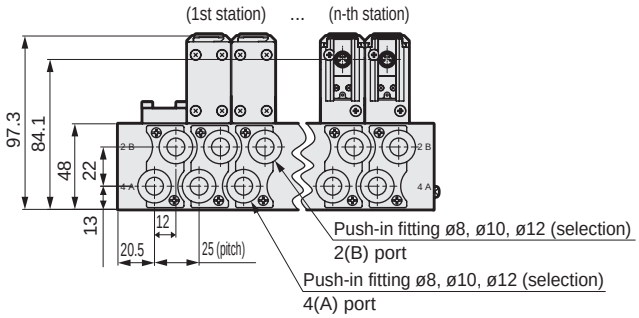
M4GE4*0EA

● Without connector (RN)

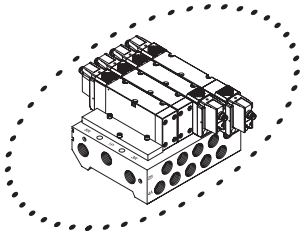


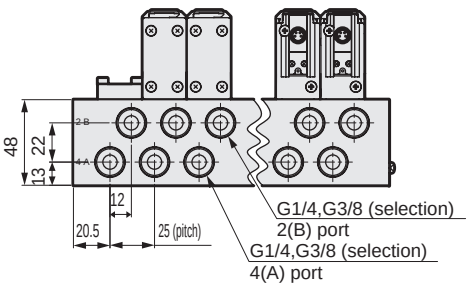




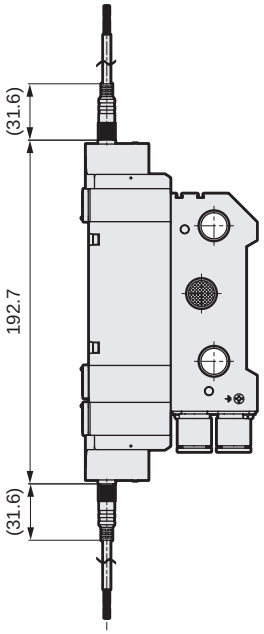


● G1/4, G3/8 female thread (08G, 10G)

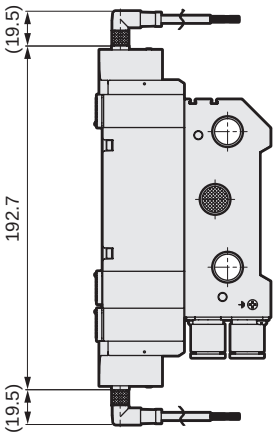




● M8 connector/straight cable (R1)



● M8 connector/L-type cable (R2)

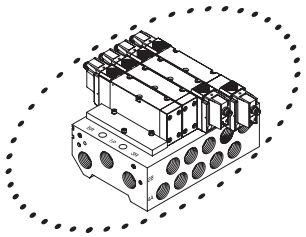


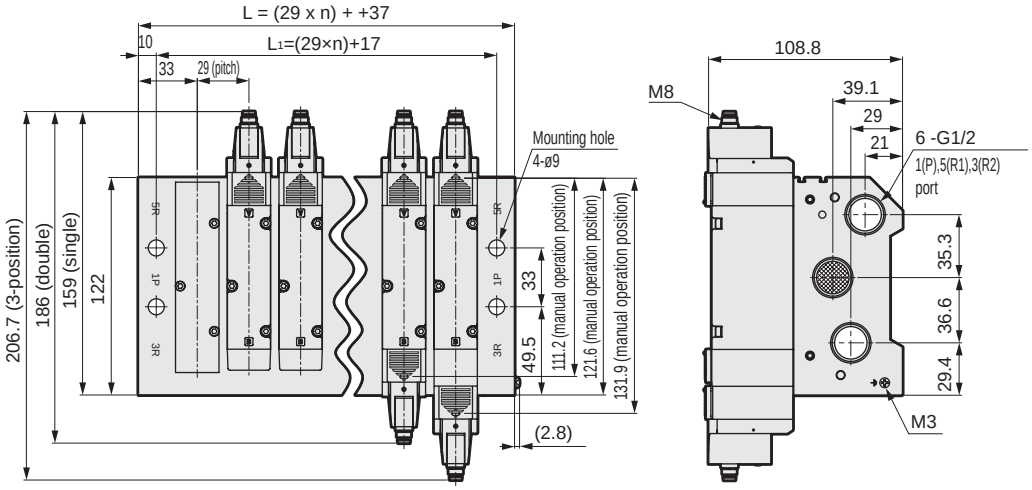
Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15
L	77	102	127	152	177	202	227	252	277	302	327	352	377	402
L1	63	88	113	138	163	188	213	238	263	288	313	338	363	388

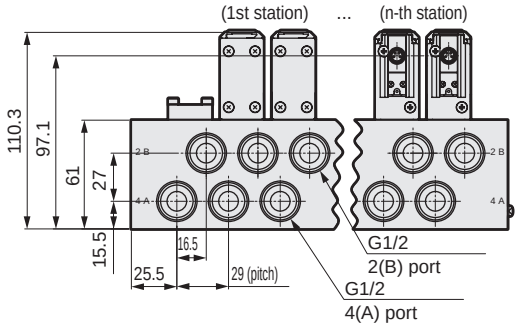
Dimensions

M4GE4*0EA

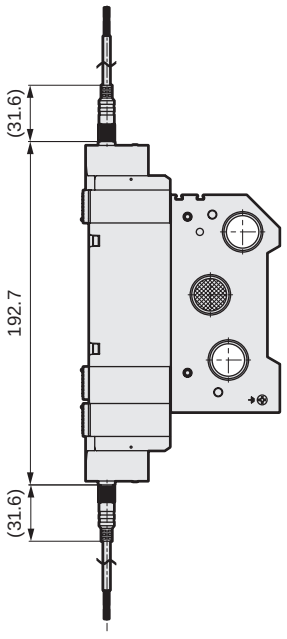
● G1/2 female thread (15G)
Without connector (RN)



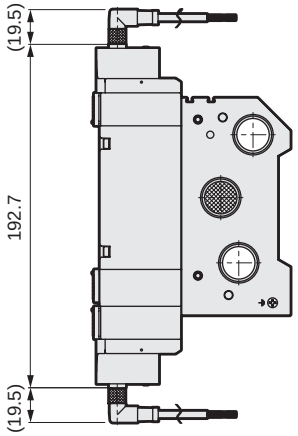




● M8 connector/straight cable (R1)



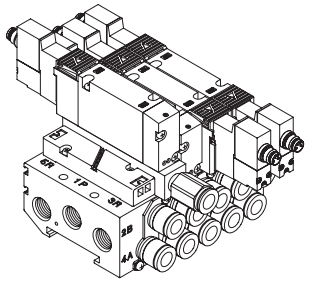
● M8 connector/L-type cable (R2)



Station No.	2	3	4	5	6	7	8	9	10	11	12
L	95	124	153	182	211	240	269	298	327	356	385
L_1	75	104	133	162	191	220	249	278	307	336	365

Related products

● Air supply spacer



Specifications

Model No.	P → A/B		A/B → R		Weight g
	C(dm³/(s·bar))	b	C(dm³/(s·bar))	b	
4G1	0.70	0.23	0.93	0.16	8
4G2	1.6	0.17	1.8	0.16	35
4G3	2.6	0.22	3.1	0.14	56

*1: Values are when a valve is mounted.
*2:Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.

How to order discrete units

● Air supply spacer

Air supply spacer model No.

4G 3 E - P - GWS10

Ⓐ Air supply spacer model No.

Ⓑ Port size *1

Code	Description	Valve model No. 4G1	4G2	4G3
Ⓐ Air supply spacer model No.				
1	For 4G1	●		
2	For 4G2		●	
3	For 4G3			●
Ⓑ Port size				
Blank	M5	●		
06G	G1/8		●	
08G	G1/4			●
GWS4	ø4 fitting	●		
GWS6	ø6 fitting	●	●	
GWS8	ø8 fitting		●	●
GWS10	ø10 fitting			●

is not available.

Accessories:2 mounting screws, 2 PR check valves, 1 body gasket

⚠ Precautions for model No. selection

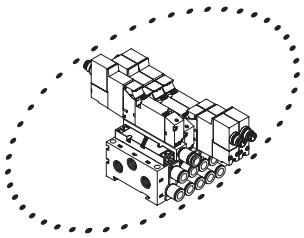
*1: Specify the air supply spacer built-in position and quantity on the manifold specifications sheet of each catalog.
*2: Combination with the masking plate is not supported.
*3 4G4 air supply spacers are made to order products. Contact CKD for details.

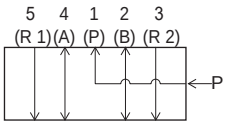
Related products

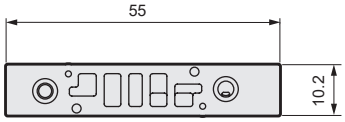
● Air supply spacer

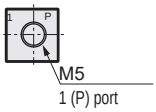
Dimensions

● 4G1

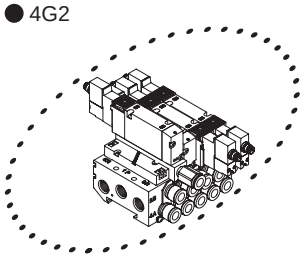


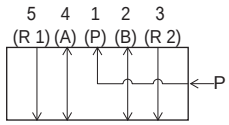


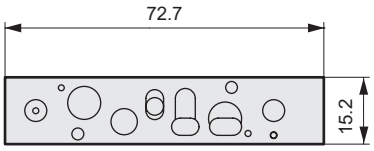


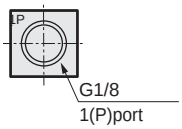


● 4G2

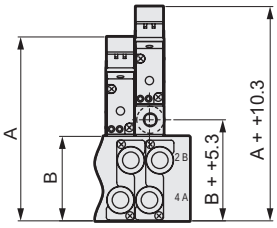


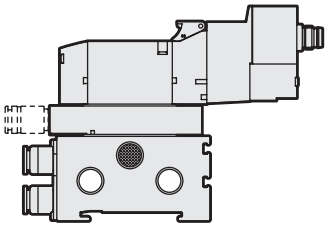




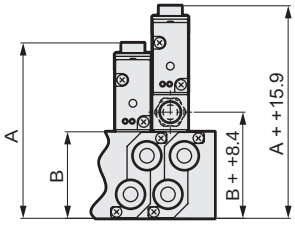


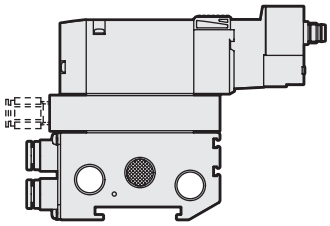
Dimensions when mounted



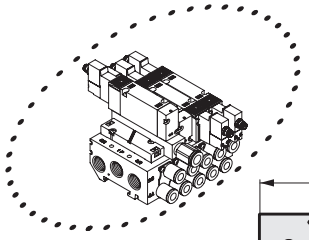


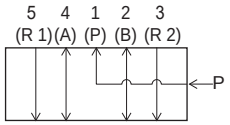
Dimensions when mounted

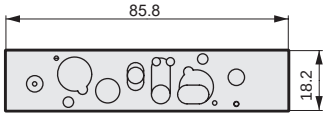


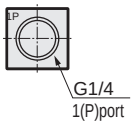


● 4G3

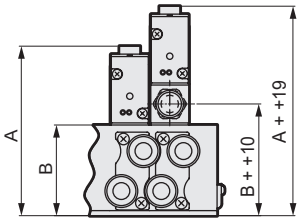


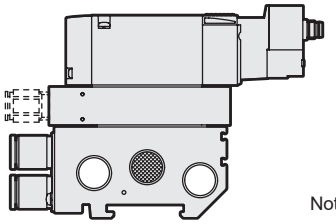






Dimensions when mounted

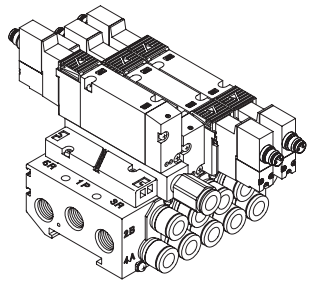




Note: For A and B dimensions, check the dimensions of the respective specifications.

Related products

● Exhaust spacer



Specifications

Model No.	P → A/B		A/B→R		Weight g
	C(dm³/(s·bar))	b	C(dm³/(s·bar))	b	
4G1	0.94	0.28	0.68	0.33	7
4G2	1.5	0.24	1.9	0.24	34
4G3	3.4	0.21	2.9	0.27	58

*1: Values are when a valve is mounted.
*2:Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.

How to order discrete units

● Exhaust spacer

Exhaust spacer model No.

4G 3 E - R - GWS10

Ⓐ Exhaust spacer model No.

Ⓑ Port size *1

Code	Description	Valve model No. 4G1	4G2	4G3
Ⓐ Exhaust spacer model No.				
1	For 4G1	●		
2	For 4G2		●	
3	For 4G3			●
Ⓑ Port size				
Blank	M5	●		
06G	G1/8		●	
08G	G1/4			●
GWS4	ø4 fitting	●		
GWS6	ø6 fitting	●	●	
GWS8	ø8 fitting		●	●
GWS10	ø10 fitting			●

is not available.

Accessories:2 mounting screws (*2), 2 PR check valves, 1 body gasket

⚠ Precautions for model No. selection

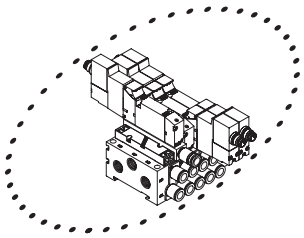
*1: Specify the exhaust spacer built-in position and quantity on the manifold specifications sheet of each catalog.
*2: Combination with the masking plate is not supported.
*3: 4G4 exhaust spacers are made to order products. Contact CKD for details.

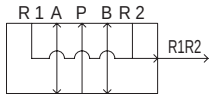
Related products

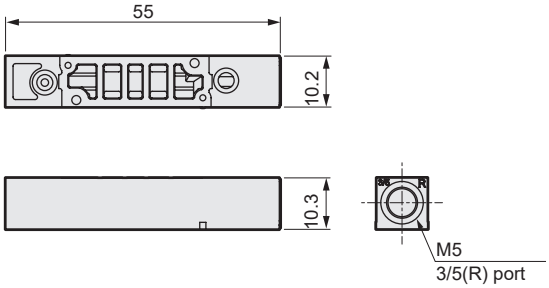
● Exhaust spacer

Dimensions

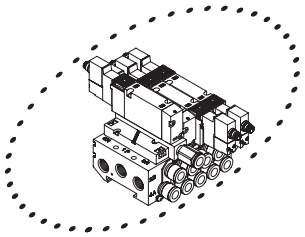
● 4G1

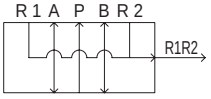


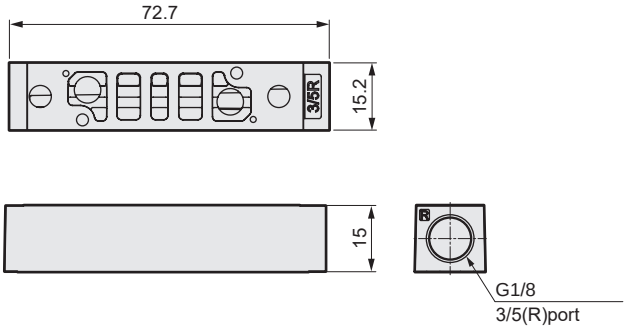




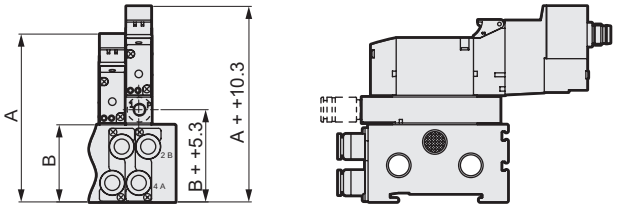
● 4G2



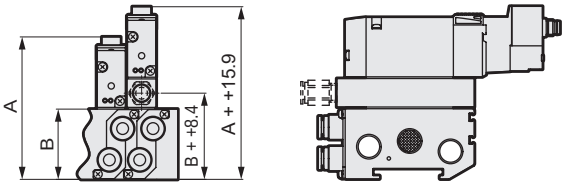




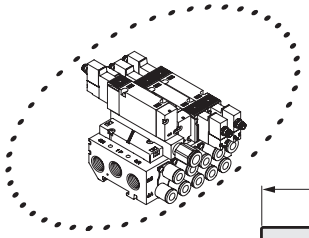
Dimensions when mounted

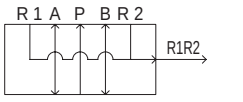


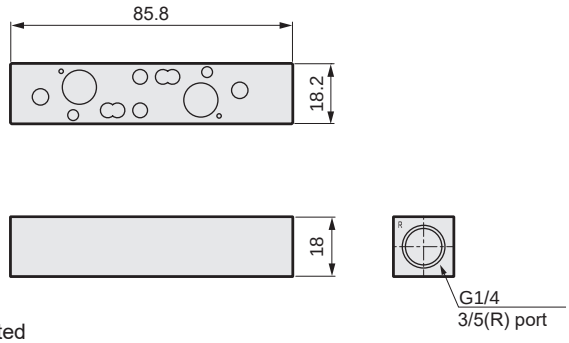
Dimensions when mounted



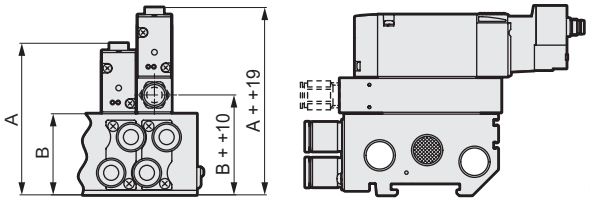
● 4G3







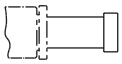
Dimensions when mounted



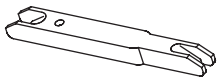
Note: For A and B dimensions, check the dimensions of the respective specifications.

Related products

● Plug type

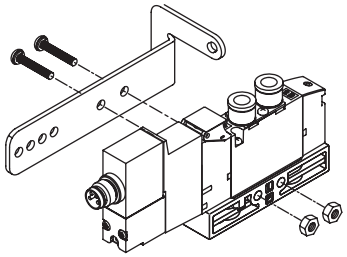
Part name	Model No.	Compatible bore size	Appearance
Blanking plug	GWP4-B	ø4	
	GWP6-B	ø6	
	GWP8-B	ø8	
	GWP10-B	ø10	
	GWP12-B	ø12	
Threaded plug	4G1R-M5P	M5	 (FPL-M5)
	4G2R-06GP	G1/8	 Hexagon socket plug
	4G3R-08GP	G1/4	
	4G3R-10GP	G3/8	
	4G4-15GP	G1/2	

● Push-in fitting tube remover
For ø4/ø6 push-in fittings
4GR-EOT4-6



Related parts

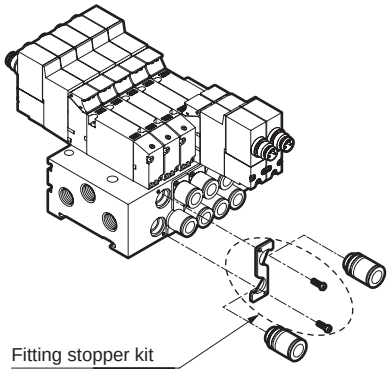
(1) Mounting plate (P) kit



Mounting (P) kit

Model	Kit model No.	Set parts
4GD1	4G1R-MOUNT-PLATE-KIT	Mounting plate, 2 mounting screws, 2 nuts
4GD2	4G2R-MOUNT-PLATE-KIT	Mounting plate, 2 mounting screws
4GD3	4G3R-MOUNT-PLATE-KIT	Mounting plate, 2 mounting screws

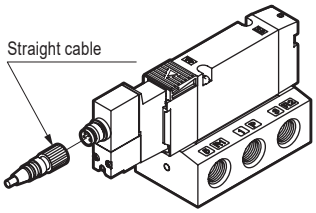
(2) Cartridge push-in fitting related parts Discrete



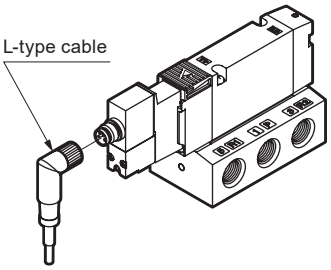
Fitting stopper plate kit

Model	Kit model No.
M4G1	4G1R-JNT-STP-PLATE-KIT
M4G2	4G2R-JNT-STP-PLATE-KIT
M4G3	4G3R-JNT-STP-PLATE-KIT
M4G4	4GB4-JNT-STP-PLATE-KIT

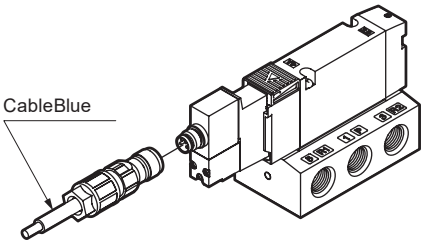
(3) M8 connector cable



Straight cable (R1)



L-type cable (R2)



Straight cable (R3)

◆Cable Capacitance and Inductance

Type	Capacitance [nF/m] at 1kHz	Inductance [mH/m] at 1kHz
Straight (R1)	0.058	0.003
L type (R2)	0.125	0.003
Straight (R3)	0.065	0.002

◆Minimum bending radius of cable

Type	No load [mm]	With load [mm]
Straight (R1)	20.0	36.0
L type (R2)	23.5	42.3
Straight (R3)	20.0	-

4GEX - M8CC - R1 - 300

Ⓐ Direction　Ⓑ Length

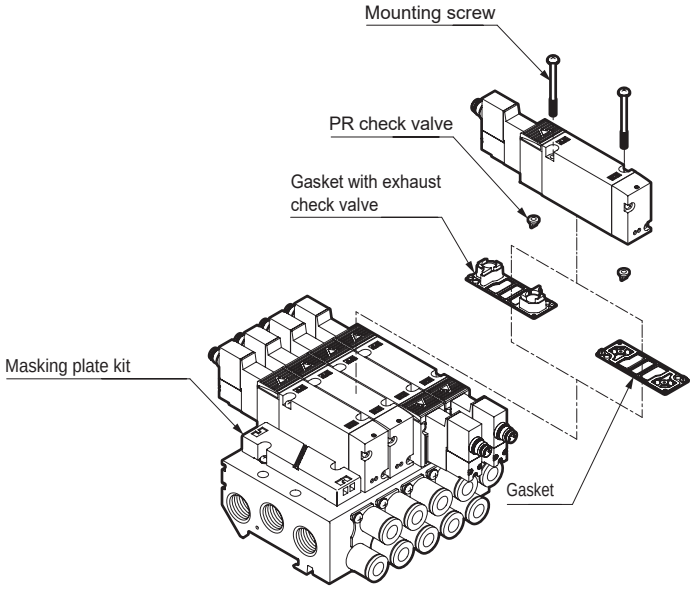
Ⓐ Direction		4G1	4G2	4G3	4G4
R 1 *1	Straight cable (color: gray)	●	●	●	●
R 2 *1	L type cable (color: black)	●	●	●	●
R 3 *2	Straight cable (color: blue)		●	●	●

Ⓑ Length	
300	Cable length 300mm
500	Cable length 500mm
1000	Cable length 1000mm
3000	Cable length 3000mm

*1:R1 and R2 types come with a blue marker for identification.
*2: Available as made to order.

Related parts

(3) Manifold related parts



Masking plate kit

Model	Model No.	Description	Remarks
M3G1/M4G1	4G1R-MP	Masking plate Gasket 2 Mounting screws	4G3/4G4 has two PR check valves attached
M3G2/M4G2	4G2R-MP		
M4G3	4G3R-MP		
M4GD4	4GA4-MP		
M4GE4	4GB4-MP		

Gasket

Model	Part model No.
3G1/4G1	4G1R-GASKET
3G1/4G1 (For masking plate)	4G1R-MP-GASKET
3G2/4G2	4G2R-GASKET
3G2/4G2 (For masking plate)	4G2R-MP-GASKET
4G3	4G3R-GASKET
4GD4	4GA4-GASKET
4GE4	4GB4-GASKET

Gasket with exhaust check valve

Model	Part model No.
3G1/4G1	4G1R-CHECK-VALVE
3G2/4G2	4G2R-CHECK-VALVE
4G3	4G3R-CHECK-VALVE

Note: 4G4 does not have a gasket with check valve.

PR check valve kit (2 per set)

Model	Kit model No.
3G1/4G1	4G1R-PR
3G2/4G2	4G2R-PR
4G3	4G3R-PR
4G4	4G4-PR

Mounting screw (10 per set)

Model	Part model No.
3G1/4G1	4G1R-SET-SCREW
3G2/4G2	4G2R-SET-SCREW
4G3	4G3R-SET-SCREW
4G4	4G4-SET-SCREW

Related parts

(4) Sub-plate

How to order

● 4GD piping adapter

4G1 R-ADAPTOR-M5G-○

Ⓐ Model No.

Code	Content Volume	Ⓐ Model No. 3G1	3G2	4G1	4G2	4G3
Ⓑ Port size (Port P/R1/R2)						
M5G	M5	●		●		
06G	G1/8		●		●	
08G	G1/4					●
Ⓒ Option						
P	With mounting plate (included)	●	●	●	●	●

is not available.

Note: For 4G4, there is no piping adapter.

● 4GE discrete sub-plate

4G1 R-SUB-BASE-06G-○

Ⓐ Model No.

Code	Content Volume	Ⓐ Model No. 3G1	3G2	4G1	4G2	4G3	4G4
Ⓑ Port size (Port A/B/P/RI/R2)							
06G	G1/8	●		●			
08G	G1/4		●		●	●	
10G	G3/8					●	●
15G	G1/2						●
Ⓒ Option							
F	A/B port filter integrated *1	●	●	●	●	●	●

*1: A filter is built into port P as standard.

is not available.

Related parts

(5) Manifold sub-plate kit individual wiring

● M4GD sub-plate

M4GD1 R - 00G - 2

Ⓐ Model No.

Code	Content Volume
Ⓐ Model No.	
M4GD1	Metal base, 4G1 size, body piping
M4GD2	Metal base, 4G2 size, body piping
M4GD3	Metal base, 4G3 size, body piping
M4GD4	Metal base, 4G4 size, body piping
Ⓓ Station No.	
2	2 stations
to	to
20	Refer to the specifications page for the max. station number.

● M4GE1 sub-plate

M4GE1R - C4G - - - 2

Ⓐ Port size
Ⓑ Option
Ⓒ Mount type
Ⓓ Station No.

Code	Content Volume	
Ⓐ Port size		
Port	**4(A), 2(B) port**	**Port P/R1/R2**
C4G	ø4 push-in fitting	G1/8
C6G	ø6 push-in fitting	
M5G	M5	
Ⓑ Option		
Blank		
F	Port A/B filter built in *1	
Ⓒ Mount type		
Blank	Direct mount	
Ⓓ Station No.		
2	2 stations	
to	to	
20	Refer to the specifications page for the max. station number.	

*1: A filter is built into port P as standard.

● M4GE2/3 sub-plate

M4GE2 R - C4G - - 2

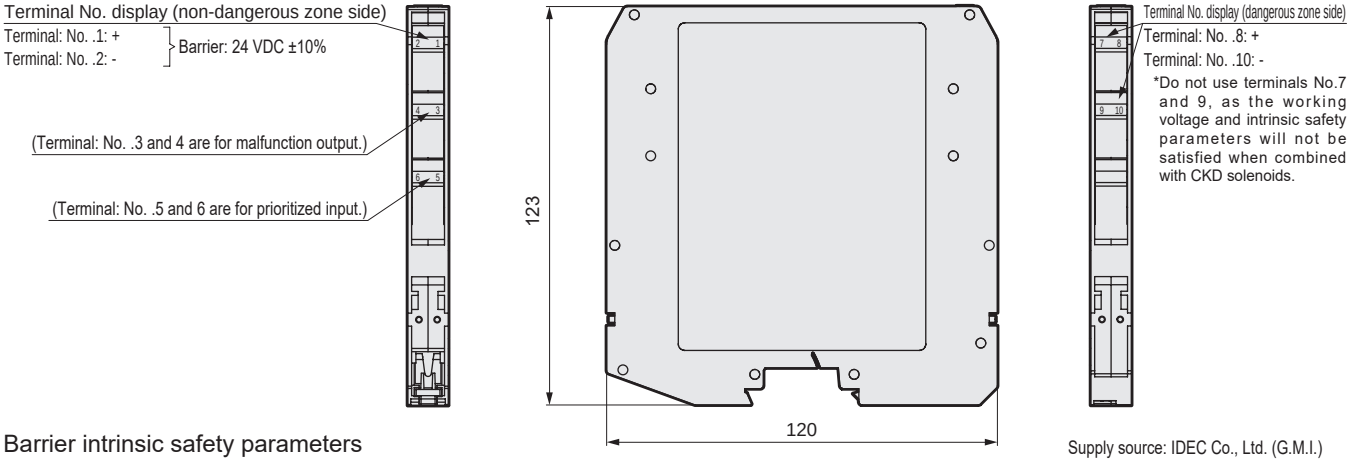
Ⓐ Model No.
Ⓑ Port size
Ⓒ Option
Ⓓ Station No.

Code	Description	Ⓐ Model No.	
		M4GE2	**M4GE3**
Ⓑ Port size			
Port	**4(A), 2(B) port**	**Port P/R1/R2 (1)=G1/4 (2)=G3/8**	
C4G	ø4 push-in fitting	(1)	
C6G	ø6 push-in fitting	(1)	(2)
C8G	ø8 push-in fitting	(1)	(2)
C10G	ø10 push-in fitting		(2)
06G	G1/8	(1)	
08G	G1/4		(3)
Ⓒ Option			
Blank			
F	Port A/B filter built in *1		
Ⓓ Station No.			
2	2 stations		
to	to		
20	Refer to the specifications page for the max. station number.		

*1: A filter is built into port P as standard.

INSULATED EXPLOSION PROOF BARRIER Dimensions

Model No.: **D5048S**



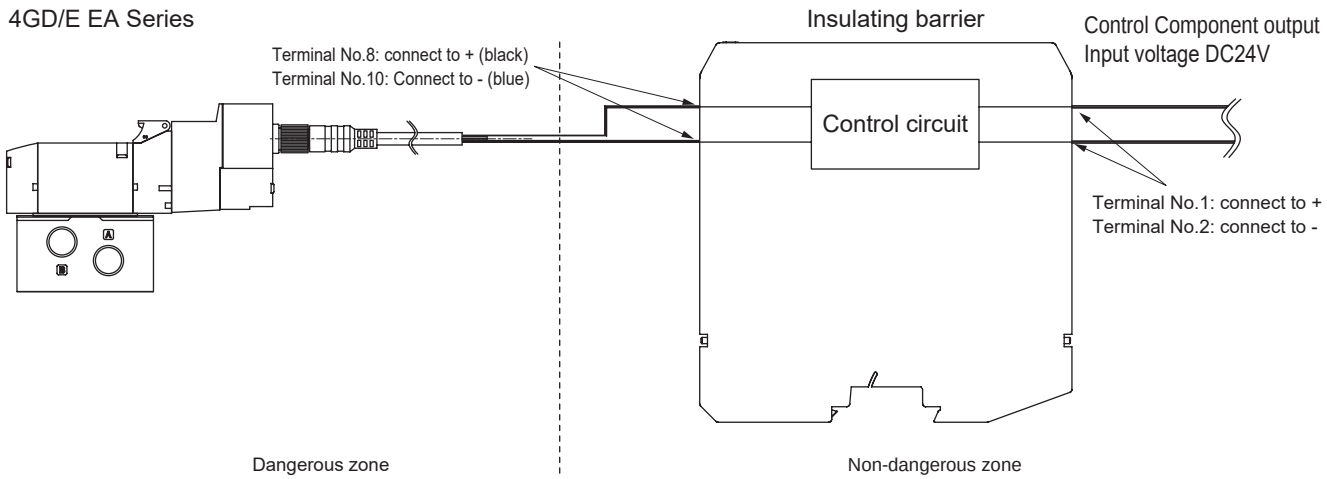
Barrier intrinsic safety parameters

Item	Between terminals No. -10
Intrinsic safety circuit max. voltage Uo	24.8V
Intrinsic safety circuit max. current Io	108mA
Intrinsic safety circuit max. power Po	667mW
Intrinsic safety circuit allowable capacitance Co	0.113 µF
Intrinsic safety circuit allowable inductance Lo	1.42mH
Operating ambient temperature range	-40 to 70°C

Supply source: IDEC Co., Ltd. (G.M.I.)
Refer to the catalog of IDEC or G.M.I for detailed specifications.
Refer to the catalog.

*1: Always use valves in combination with a barrier.
*2: Connection terminals are polarized. Take care to prevent incorrect wiring.
*3: Compliant electric wire is 0.25 to 2.5mm^2.
*4. Recommended terminal tightening torque is 0.5 to 0.6N•m.
*5: Barrier degree of protection is IP20.

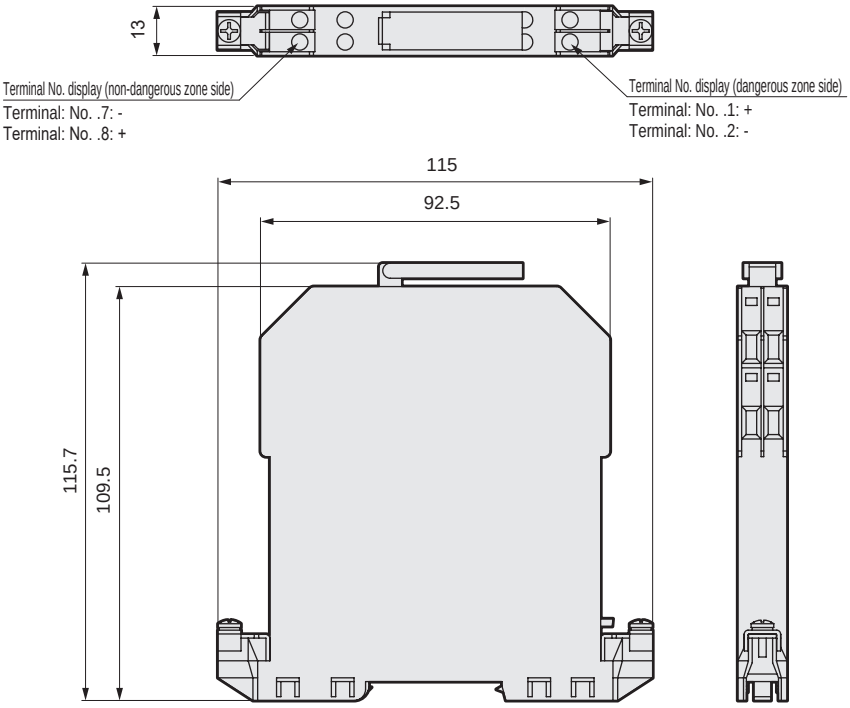
About Valve and Barrier Connections



* A voltage equivalent to DC12V is supplied to the valve via an insulating barrier.

Zener barrier (1CH) Dimensions

Model No.: **Z728**



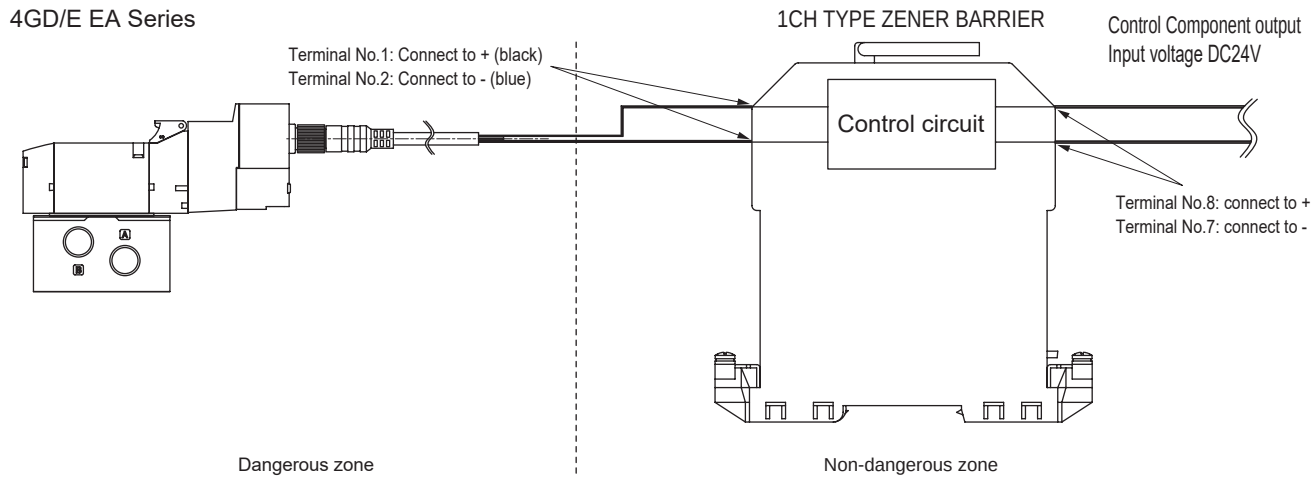
Supply sources:Pepperl+Fuchs Inc.
Refer to the Pepperl+Fuchs Inc. catalog for detailed specifications.

Barrier intrinsic safety parameters

Item	Description
Intrinsic safety circuit max. voltage Uo	28V
Intrinsic safety circuit max. current Io	93mA
Intrinsic safety circuit max. power Po	0.65 W
Intrinsic safety circuit allowable capacitance Co	0.083 μF
Intrinsic safety circuit allowable inductance Lo	3.05mH
Operating ambient temperature range	-20 to 60°C
Current limiting resistor	300 Ω

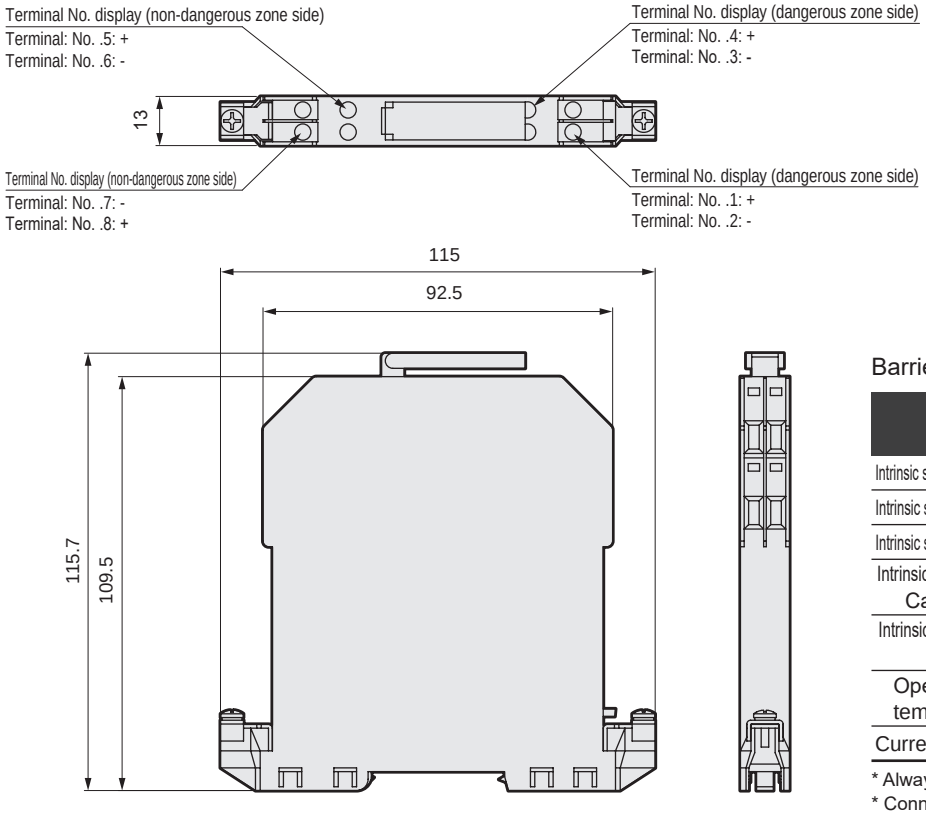
* Always use valves in combination with a barrier.
* Connection terminals are polarized.
  Incorrect wiring leads to breakdown of the barrier.
* compliant wire has a allowable area of 2.5mm^2.
* Barrier degree of protection is IP20.
* Type A grounding is required for barrier installation.

About Valve and Barrier Connections



Zener barrier (2CH) Dimensions

Model No.: **Z779**



Supply sources:Pepperl+Fuchs Inc.
Refer to the Pepperl+Fuchs Inc. catalog for detailed specifications.

Barrier intrinsic safety parameters

Item	Description	
	CH1	CH2
Intrinsic safety circuit max. voltage Uo	28V	28V
Intrinsic safety circuit max. current Io	93mA	93mA
Intrinsic safety circuit max. power Po	0.65 W	0.65 W
Intrinsic safety circuit allowable Capacitance Co	0.083 μF	0.083 μF
Intrinsic safety circuit allowable Inductance Lo	3.05mH	3.05mH
Operating ambient temperature range	-20 to 60°C	-20 to 60°C
Current limiting resistor	301 Ω	301 Ω

* Always use valves in combination with a barrier.
* Connection terminals are polarized.
  Incorrect wiring leads to breakdown of the barrier.
* Compliant wire has a allowable area of 2.5mm^2.
* Barrier degree of protection is IP20.
* Type A grounding is required for barrier installation.

About Valve and Barrier Connections