



Individual wiring type manifold

Body porting

Direct mount type/DIN rail mount type

M4GA1-2-3/M4GA1-2-3-D Series

• Applicable cylinder bore size: 20 to 100 mm

CAD DATA AVAILABLE.

Manifold common specifications

Descriptions		
Manifold type		Integrated base
Installation method		DIN rail mount type
Air supply/exhaust air method		Common supply/exhaust (check valve incorporated)
Pilot exhaust air method	Internal pilot	Main/pilot valves common exhaust (pilot exhaust check valve incorporated)
	External pilot	Main valve/pilot valve individual exhaust
Piping direction		Valve top direction
Working fluid		Compressed air
Valve and solenoid type		Pilot operated soft spool valve
Min. working pressure	MPa	0.2 (2-position, 3-position)
Max. working pressure	MPa	0.7
Withstanding pressure	MPa	1.05
Ambient temperature	°C	-5 to 55
Fluid temperature	°C	5 to 55
Manual override		Non-lock/lock common type
Lubrication	Note 1	Not required
Protection structure	Note 1	Dust proof
Vibration/impact	m/s ²	50 or less/300 or less
Working environment		Not to be subject to corrosive gas

Electrical specifications

Descriptions		
Rated voltage	DC	12, 24
	V AC	100
Rated voltage fluctuation		±10%
Holding current	DC24	0.023(0.025)
	Note 3 DC12	0.046(0.050)
	A AC100	0.010(0.012)
Power consumption	DC24	0.55 (0.6)
	Note 3 W DC12	0.55 (0.6)
Apparent power VA	AC100	1.0 (1.2)
Heat proof class		B
Temperature rise °C		50
Surge suppressor		Option
Indicator		Indicator light(Optional)

Note 3. For indicator light, refer to the value in ().

Please refer to Page 90 about JIS symbol.

Note 1 For lubrication, please use turbine oil Class 1 1SOVG32.

Too much lubrication, intermittent lubrication may cause unstable operation.

Note 2. Not to be subject to water drip, oil etc.

For DIN terminal box specifications, IP65 (jet-proof type). Applicable cable outer diameter and specified tightening torque conformable with regulations should be observed.

<Reference> Pressure unit is MPa. Conversion ratio is 1MPa=10.1972kgf/cm².

Individual specifications

Descriptions		M3GA1/M4GA1		M3GA2/M4GA2		M3GA3/M4GA3		
		Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN rail mount	
Max. station number	Standard (internal pilot)	20 station	16 station	20 station	16 station	20 station	16 station	
	External pilot	12 station	12 station					
Port size	Port A/B	Push in joint 4, 6 dia. M5		Push in joint 4, 6, 8 dia. Rc1/8		Push in joint 6, 8, 10 dia. Rc1/4		
	Port P/R1/R2	Rc1/8		Rc1/4		Rc3/8		
Manifold base		Standard	23n+52	25n+60	47n+64	49n+92	74n+88	76n+117
Mass formula (n: Station #) g		External pilot	36n+105	38n+113	88n+135	90n+163	136n+194	138n+223

Read cautions for how to install DIN rail" (Page 81) before starting selection.

When station number is more than 10 (for 4G3, 5 station), air should be supplied and exhausted from ports on both sides.

Manifold base mass is the value for thread specifications.

Descriptions			M3GA1/M4GA1		M3GA2/M4GA2		M3GA3/M4GA3		
			P → A/B	A/B → R1/R2	P → A/B	A/B → R1/R2	P → A/B	A/B → R1/R2	
Effective sectional area mm ²	Port size	Port A/B	Push in joint 6 dia.		Push in joint 8 dia.		Push in joint 10 dia.		
	2-position	3-position	All ports closed	5.0	4.0	11	9.0	18	16
			ABR connection	5.0	5.5	10	10	17	17
			PAB connection	5.0	4.0	10	9.0	17	16
			PAB connection	6.0	5.5	13	10	19	17

Effective sectional area of 2-position and ABR connection is the value when check valve incorporated.

M4GA1/2/3 Series

Individual wiring type manifold: Body porting

How to order

Manifold model No.

M4GA1 1 0 C6 E2 H D

3 port manifold model No.

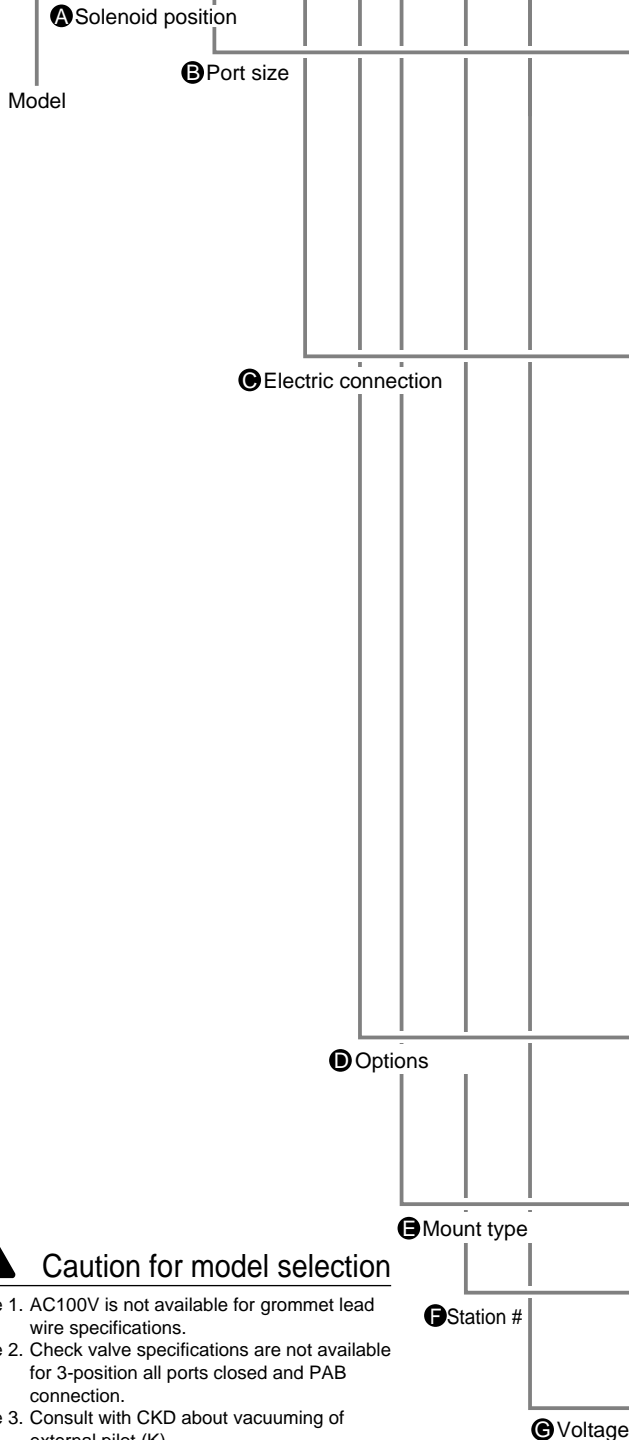
M3GA1 1 0 C6 E2 H D

Discrete valve for base installation

4GA1 1 9 C6 E2 H

Discrete 3 port valve for base installation

3GA1 1 9 C6 E2 H



- Complete "manifold specification sheet" (Page 227 to 229).

		Model					
		M3GA1	M3GA2	M3GA3	M4GA1	M4GA2	M4GA3
Symbol	Descriptions						
A 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				●	●	●
1	2-position single solenoid, normally closed	●	●	●			
11	2-position single solenoid, normally open	●	●	●			
8	Mix manifold	●	●	●	●	●	●
B Port size							
Port	Port A/B	Port P/R1/R2 ②=Rc1/8 ③=Rc1/4 ④=Rc3/8					
C4	4 mm push in joint	②	③		②	③	
C6	6 mm push in joint	②	③	④	②	③	④
C8	8 mm push in joint		③	④		③	④
C10	10 mm push in joint			④			④
CX	Push in mix joint	②	③	④	②	③	④
M5	M5	②			②		
06	Rc1/8		③			③	
08	Rc1/4			④			④
C Electric connection							
Blank	Grommet lead wire (300mm) <small>Note 1</small>	●	●	●	●	●	●
B	DIN terminal box (Pg7) surge suppressor/light		●	●			●
E-connector (up/lateral common)							
E0	Lead wire (300mm)	●	●	●	●	●	●
E00	Lead wire (500mm)	●	●	●	●	●	●
E01	Lead wire (1000mm)	●	●	●	●	●	●
E02	Lead wire (2000mm)	●	●	●	●	●	●
E03	Lead wire (3000mm)	●	●	●	●	●	●
E2	Lead wire (300mm) surge suppressor/light	●	●	●	●	●	●
E20	Lead wire (500mm) surge suppressor/light	●	●	●	●	●	●
E21	Lead wire (1000mm) surge suppressor/light	●	●	●	●	●	●
E22	Lead wire (2000mm) surge suppressor/light	●	●	●	●	●	●
E23	Lead wire (3000mm) surge suppressor/light	●	●	●	●	●	●
E0N	No lead wire (no socket)	●	●	●	●	●	●
E2N	No lead wire (no socket) surge suppressor/light	●	●	●	●	●	●
E3	No lead wire (socket/terminal attached) surge suppressor/light	●	●	●	●	●	●
E1	No lead wire (socket/terminal attached)	●	●	●	●	●	●
EJ-connector (socket with cover, up/lateral common)							
E01J	Lead wire (1000mm)	●	●	●	●	●	●
E02J	Lead wire (2000mm)	●	●	●	●	●	●
E03J	Lead wire (3000mm)	●	●	●	●	●	●
E21J	Lead wire (1000mm) surge suppressor/light	●	●	●	●	●	●
E22J	Lead wire (2000mm) surge suppressor/light	●	●	●	●	●	●
E23J	Lead wire (3000mm) indicator light	●	●	●	●	●	●
D Option							
Blank	Blank	●	●	●	●	●	●
H	Check valve (standard) <small>Note 2</small>	●	●	●	●	●	●
K	External pilot <small>Note 3</small>	●	●	●	●	●	●
A	Ozone/coolant proof	●	●	●	●	●	●
F	Filter incorporated in Port A/B (Port P: Provided as standard)	●	●	●	●	●	●
E Voltage							
Blank	Direct mount type	●	●	●	●	●	●
D	DIN rail mount type	●	●	●	●	●	●
E Station #							
2	2 station	●	●	●	●	●	●
to	to	●	●	●	●	●	●
20	Refer to Page 156 about maximum station number.	●	●	●	●	●	●
E Voltage							
1	AC100V (rectified bridge incorporated)	●	●	●	●	●	●
3	DC24V	●	●	●	●	●	●
4	DC12V	●	●	●	●	●	●

is not available.

Caution for model selection

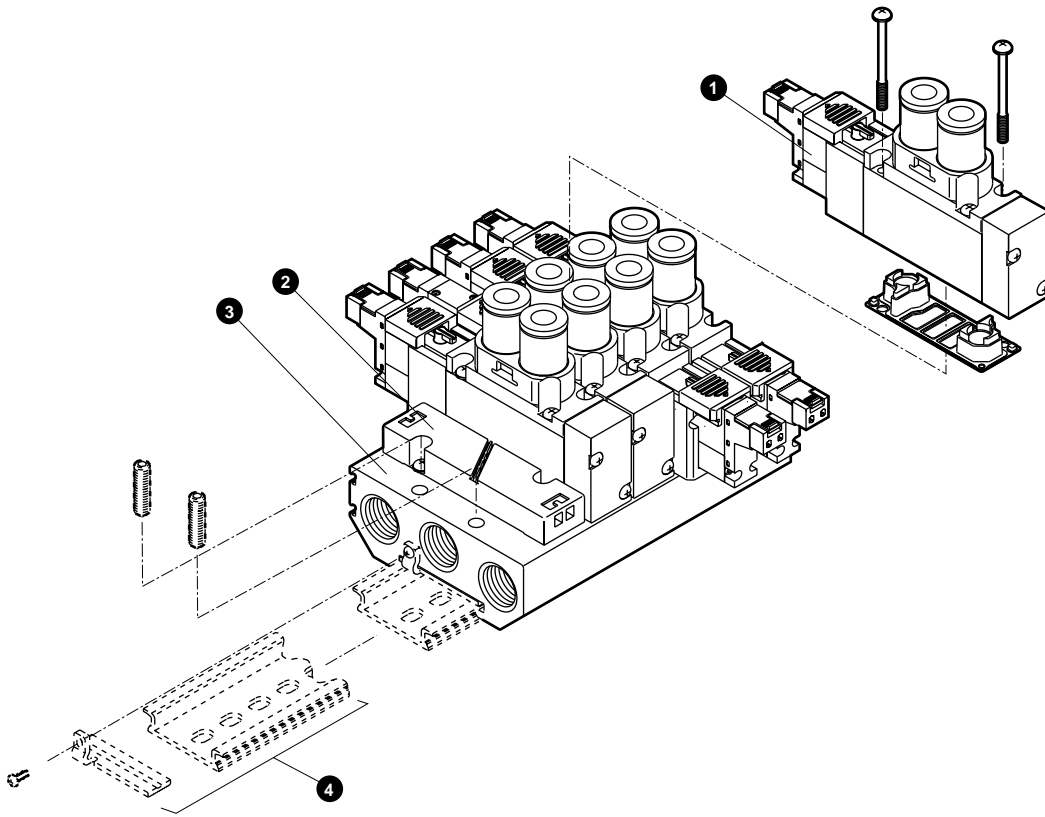
- Note 1. AC100V is not available for grommet lead wire specifications.
- Note 2. Check valve specifications are not available for 3-position all ports closed and PAB connection.
- Note 3. Consult with CKD about vacuuming of external pilot (K).

4SA/B0
4SA/B1
4GA/B
MN4GA/B
4GA/B (master)
MN3S0/
MN4S0
4TB
4L2-4/
LMF0
4KA/B
4F
PV5/
CMF
3MA/B0
3PA/B
P/M/B
NP/NAP/
NVP
4F**0E
HMV/
HSV
Uniwire
system
SKH
PCD/
FS/FD
3, 5 port pilot operated valve
Individual wiring manifold

M4GA1/2/3 Series

Individual wiring type manifold: Body porting

Explanation of manifold components and parts list




Main construction part list

No.	Construction parts name	Model No.	Description	Remarks
1	Discrete valve for base installation	4GA ** 9 -[Port size]-[Electric connection] -[Option]-[Voltage] └─ Solenoid position └─ Flow rate	Discrete valve Gasket Set screw 2 PR check valve 2	Details Page 157
2	Masking plate	4G1 4G1-MP 4G2 4G2-MP 4G3 4G3-MP	Masking plate Gasket Set screw 2 PR check valves 2	
3	Manifold base assembly	M4GA * - 00 - [Option] - [Station #] └─ Flow rate	Manifold base	
4	DIN rail kit			Details Page 81

Repair parts and related part list

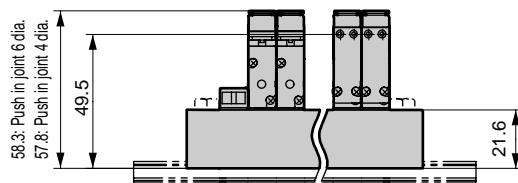
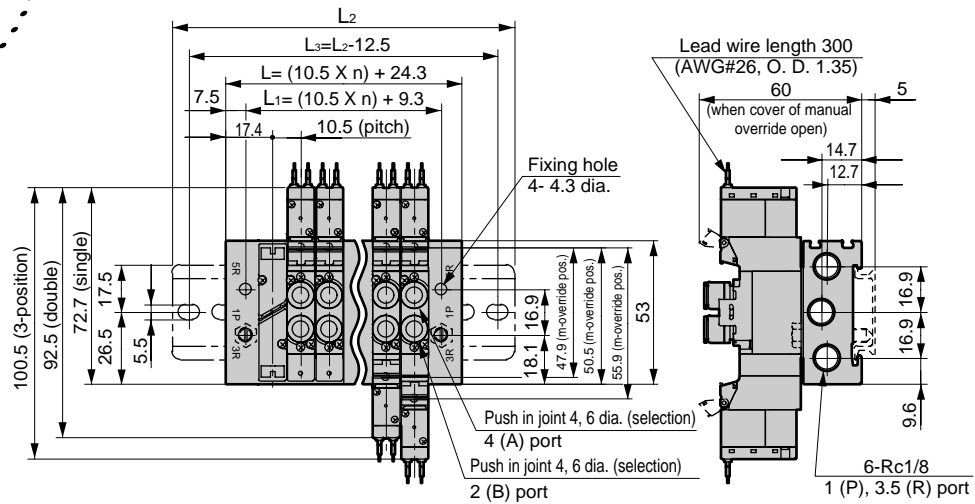
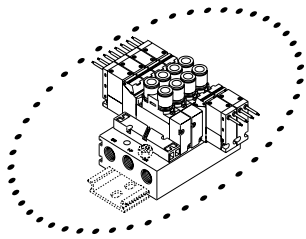
No.	Parts name	Model No.	No.	Parts name	Model No.
-	Coil assembly	4G-[Electric connection]-*-[Coil voltage] └─ Blank: Standard A: Ozone proof └─ Blank: Grommet lead wire	-	Cartridge type quick connector and related parts	4G1 4 dia. straight type 4G1-JOINT-C4 6 dia. straight type 4G1-JOINT-C6 Plug cartridge 4G1-JOINT-CPG
-	E-connector Socket assembly	4G- SOCKET ASSY -[Electric connection]-[Voltage]	4G2 4 dia. straight type 4G2-JOINT-C4 6 dia. straight type 4G2-JOINT-C6 8 dia. straight type 4G2-JOINT-C8 Plug cartridge 4G2-JOINT-CPG		
-	Silencer	For M5: SLM- M5 For Rc1/8: SLW-6A, SLW-6S For Rc1/4: SLW-8A, SLW-8S For Rc3/8: SLW-10A, SLW-10L	4G3 6 dia. straight type 4G3-JOINT-C6 8 dia. straight type 4G3-JOINT-C8 10 dia. straight type 4G3-JOINT-C10 Plug cartridge 4G3-JOINT-CPG		

Dimensions

M4GA1  (File name: Page 240 or Ending 16)

• Grommet lead wire(Blank)

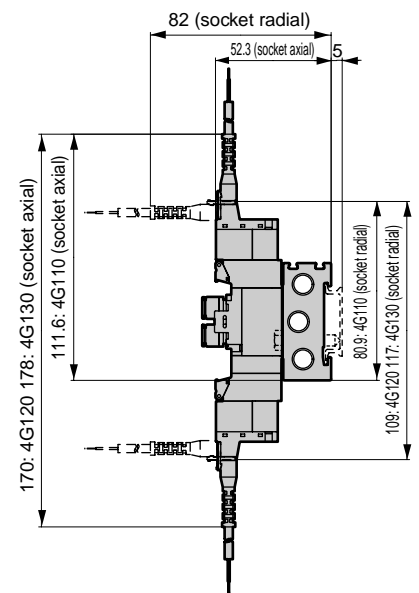
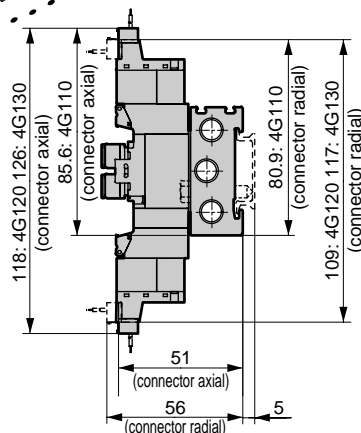
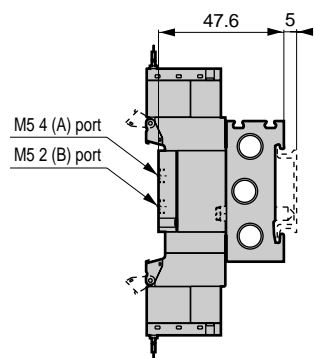
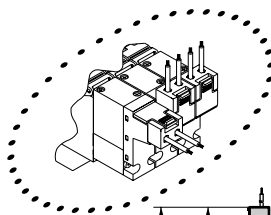
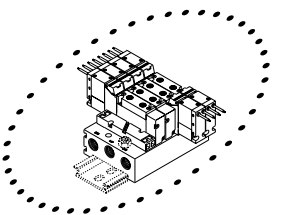
• For M3GA1, either Port A or B is blanking plug.



• M5 female thread type(M5)

• E-connector type(E)

• EJ-connector type(E**J)



Note. Figure of E-connector (E), EJ-connector (E**J) shows dimensions of DC specifications.

For AC100V, valve overall length is single: 3.5mm longer, while double/3-position: 7mm longer.

Station #	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
L ₂	87.5	100.0	112.5	125.0	137.5	150.0	162.5	175.0	187.5	200.0	212.5	225.0	237.5						
L ₃	75.0	87.5	100.0	112.5	125.0	137.5	150.0	162.5	175.0	187.5	200.0	212.5	225.0						

4SA/B0

4SA/B1

4GA/B

MN4GA/B

4GA/B (master)

MN3S0/

MN4S0

4TB

4L2-4/

LMF0

4KA/B

4F

PV5/

CMF

3MA/B0

3PA/B

P/M/B

NP/NAP/

NVP

4F**0E

HMV/

HSV

Uniwire

system

SKH

PCD/

FS/FD


3, 5 port pilot operated valve

Individual wiring manifold

M4GA2 Series

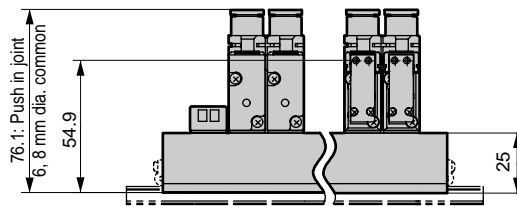
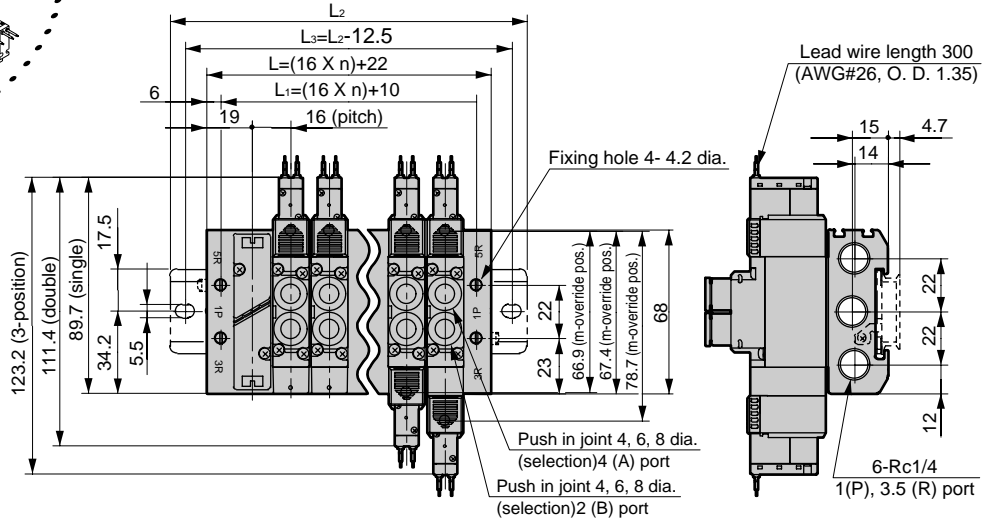
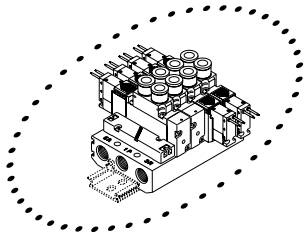
Individual wiring type manifold: Body porting

Dimensions

M4GA2  (File name: Page 240 or Ending 16)

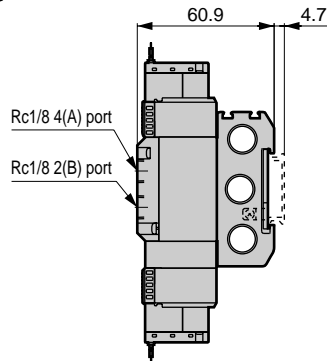
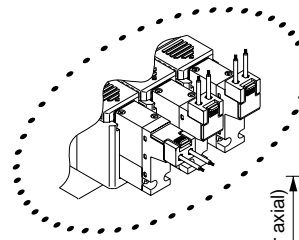
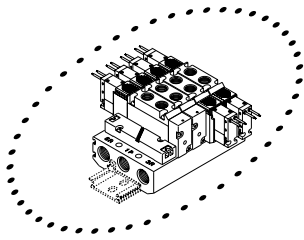
• Grommet lead wire(Blank)

• For M3GA2, either Port A or B is blanking plug.



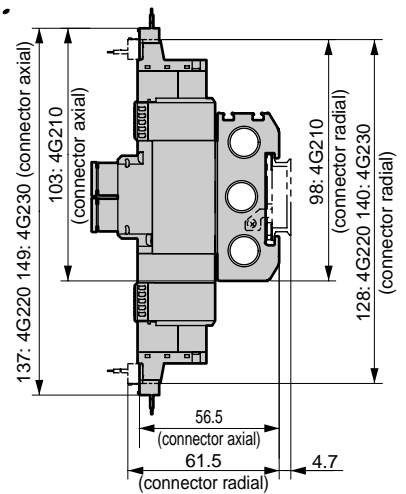
• Rc1/8 female thread type(06)

• E-connector type(E)



Note. Dimensions of DC specifications are shown.

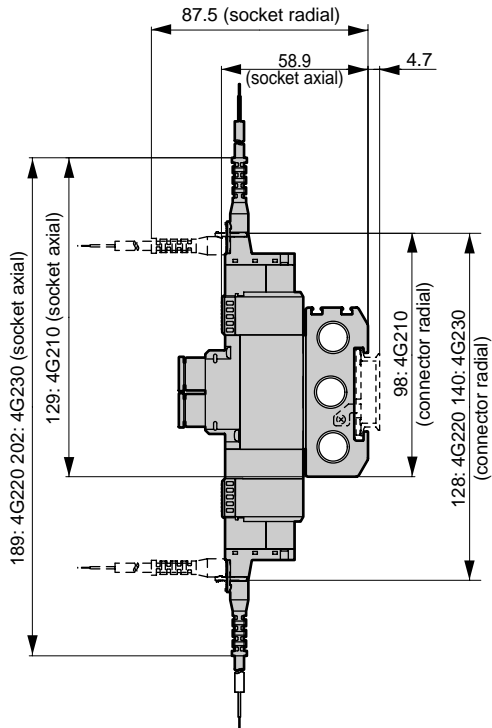
When AC100V, valve overall length is single: 3.5mm longer while double/3-position: 7 mm longer.



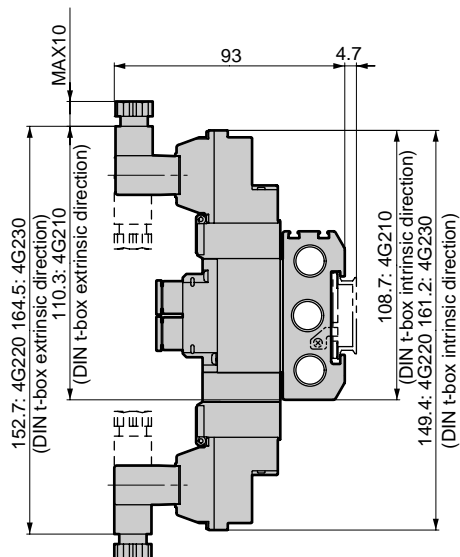
Station #	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	54	70	86	102	118	134	150	166	182	198	214	230	246	262	278	294	310	326	342
L ₁	43	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330
L ₂	87.5	112.5	137.5	150.0	162.5	175.0	200.0	212.5	225.0	250.0	262.5	275.0	287.5	312.5	325.0				
L ₃	75.0	100.0	125.0	137.5	150.0	162.5	187.5	200.0	212.5	237.5	250.0	262.5	275.0	300.0	312.5				

Dimensions

- EJ-connector type(E**J)



- DIN terminal box type(B)



4SA/B0

4SA/B1

4GA/B

MN4GA/B

4GA/B
(master)

MN3S0/
MN4S0

4TB

4L2-4/
LMF0

4KA/B

4F

PV5/
CMF

3MA/B0

3PA/B

P/M/B

NP/NAP/
NVP

4F**0E

HMV/
HSV

Uniwire
system

SKH


PCD/
FS/FD

3, 5 port pilot operated valve
Individual wiring manifold

M4GA3 Series

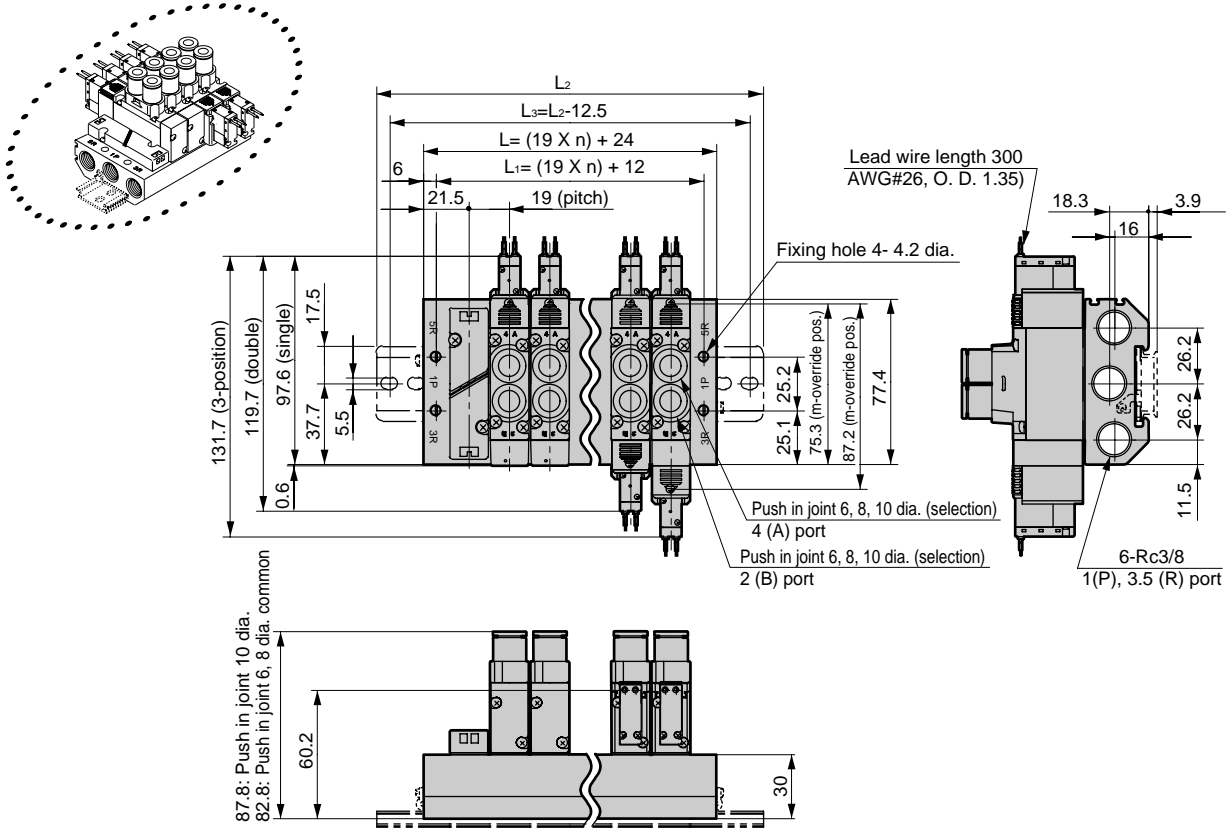
Individual wiring type manifold: Body porting

Dimensions

M4GA3  (File name: Page 240 or Ending 16)

• Grommet lead wire(Blank)

• For M3GA3, either Port A or B is blanking plug.

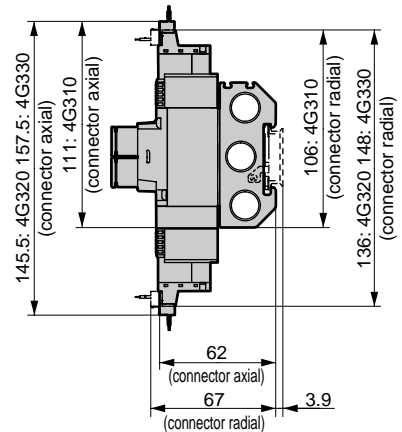
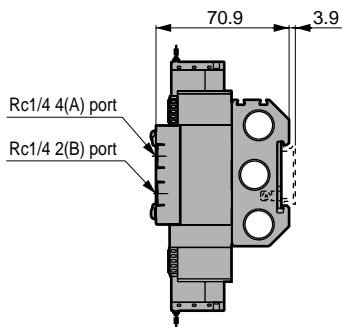
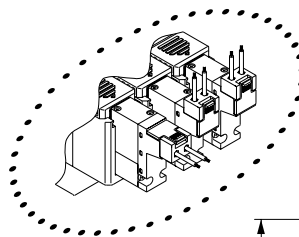
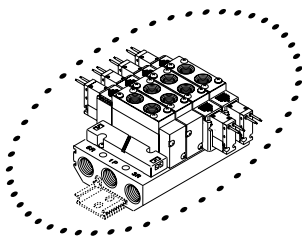


• Rc1/4 female thread type(08)

• E-connector type(E)

Note. Dimensions of DC specifications are shown.

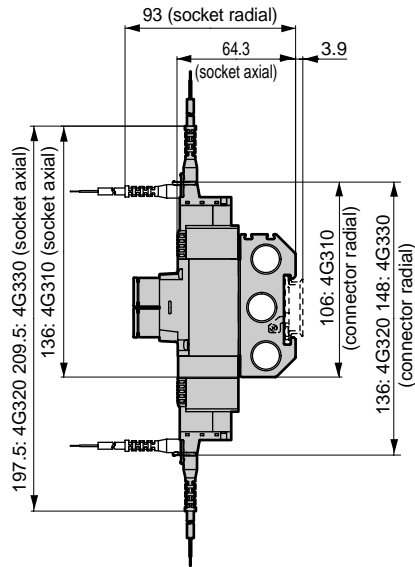
When AC100V, valve overall length is single: 3.5mm longer while double/3-position: 7 mm longer.



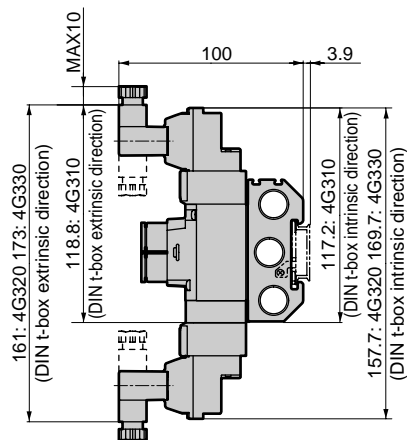
Station #	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	62	81	100	119	138	157	176	195	214	233	252	271	290	309	328	347	366	385	404
L ₁	50	69	88	107	126	145	164	183	202	221	240	259	278	297	316	335	354	373	392
L ₂	112.5	125.0	150.0	162.5	187.5	200.0	225.0	237.5	262.5	275.0	300.0	312.5	337.5	350.0	375.0				
L ₃	100.0	112.5	137.5	150.0	175.0	189.5	212.5	225.0	250.0	262.5	287.5	300.0	325.0	337.5	362.5				

Dimensions

- EJ-connector type(E**J)



- DIN terminal box type(B)



4SA/B0

4SA/B1

4GA/B

MN4GA/B

4GA/B
(master)

MN3S0/
MN4S0

4TB

4L2-4/
LMF0

4KA/B

4F

PV5/
CMF

3MA/B0

3PA/B

P/M/B

NP/NAP/
NVP

4F**0E

HMV/
HSV

Uniwire
system

SKH


PCD/
FS/FD

3 5 port pilot operated valve
Individual wiring manifold

M4GA1 Series

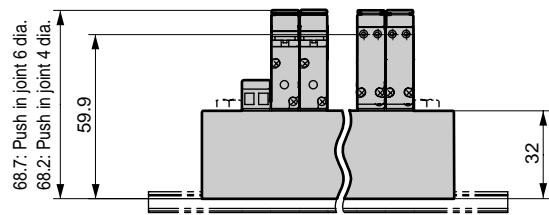
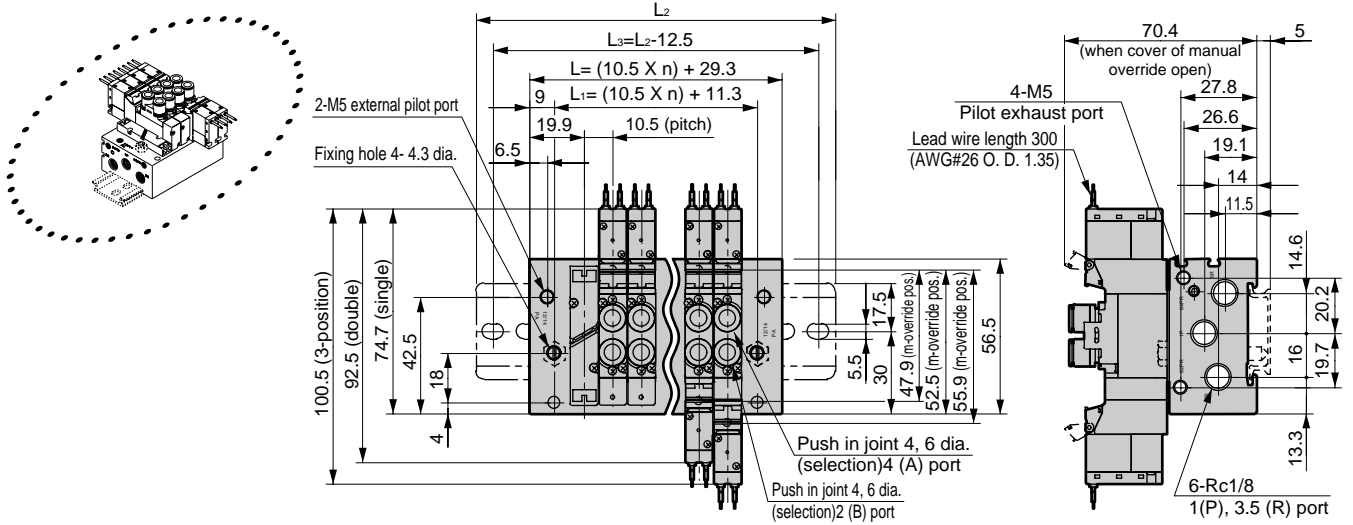
Individual wiring type manifold: Body porting

Dimensions

M4GA1  (File name: Page 240 or Ending 16)

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

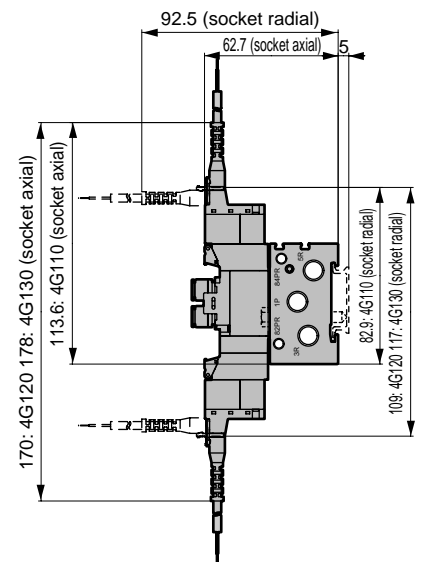
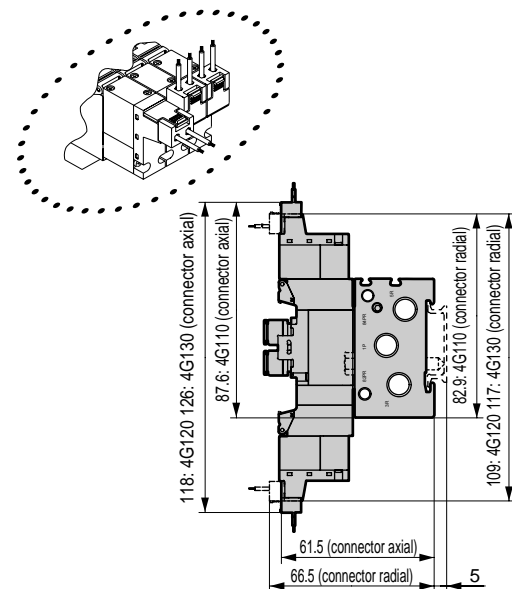
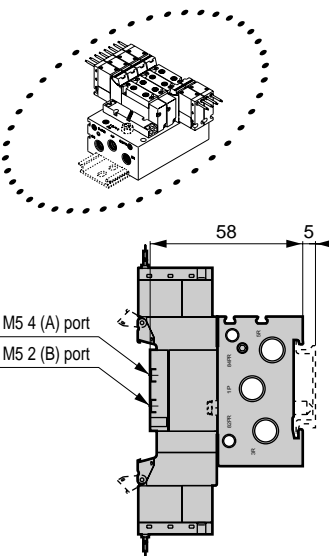
• For M3GA1, either Port A or B is blanking plug.



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

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

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




Note. Figure of E-connector (E), EJ-connector (E**J) shows dimensions of DC specifications.
For AC100V, valve overall length is single: 3.5mm longer, while double/3-position: 7mm longer.

Station #	2	3	4	5	6	7	8	9	10	11	12
L	50.3	60.8	71.3	81.8	92.3	102.8	113.3	123.8	134.3	144.8	155.3
L1	32.3	42.8	53.3	63.8	74.3	84.8	95.3	105.8	116.3	126.8	137.3
L2	100.0	112.5	112.5	125.0	137.5	150.0	162.5	175.0	175.0	187.5	200.0
L3	87.5	100.0	100.0	112.5	125.0	137.5	150.0	162.5	162.5	175.0	187.5

M4GA2 Series

Individual wiring type manifold: Body porting

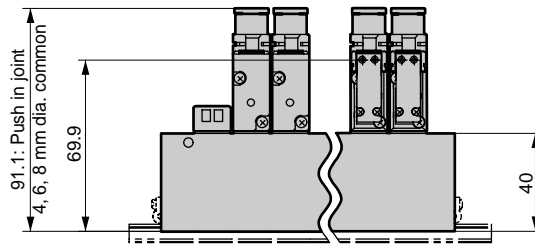
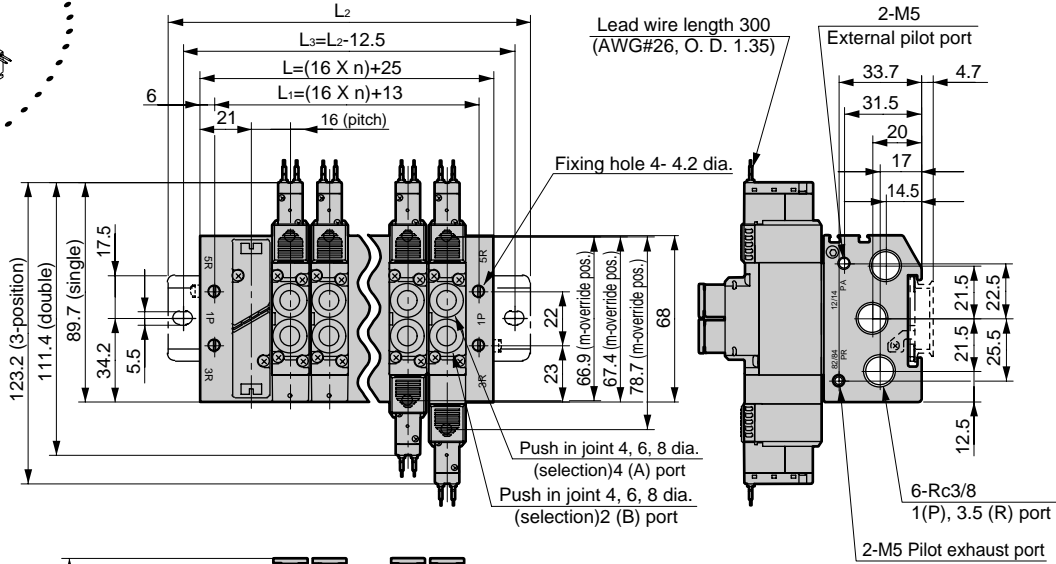
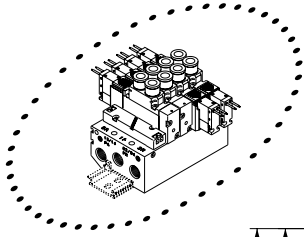
Dimensions

M4GA2  (File name: Page 240 or Ending 16)

• External pilot (K)

Grommet lead wire(Blank)

• For M3GA2, either Port A or B is blanking plug.

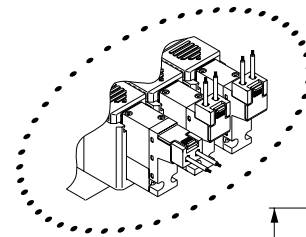
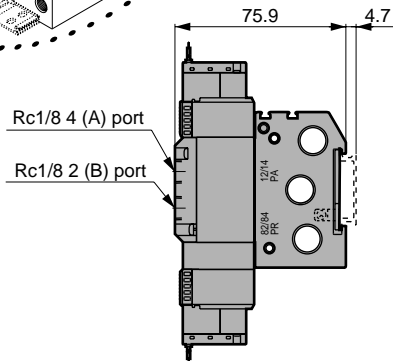
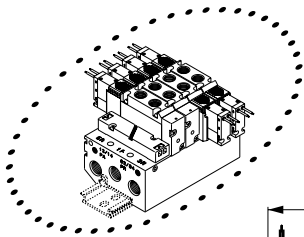


• External pilot (K)

Rc1/8 female thread type(06)

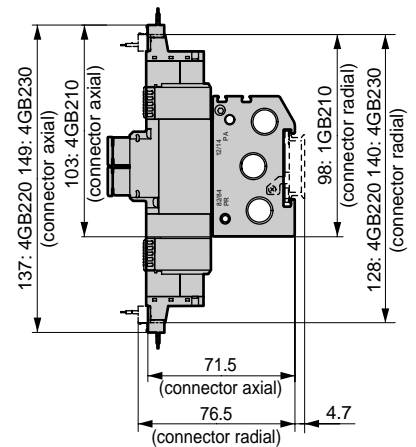
• External pilot (K)

E-connector type(E)



Note. Dimensions of DC specifications are shown.

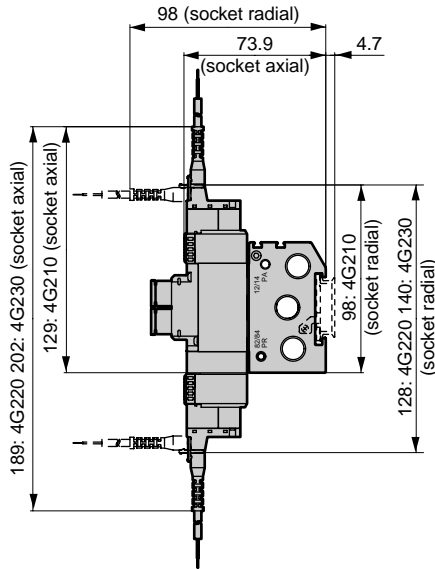
When AC100V, valve overall length is single: 3.5mm longer while double/3-position: 7 mm longer.



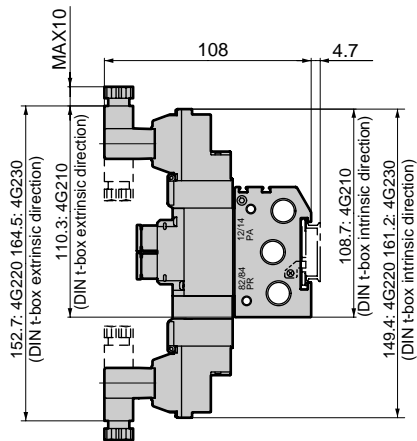
Station #	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	57	73	89	105	121	137	153	169	185	201	217	233	249	265	281	297	313	329	345
L ₁	45	61	77	93	109	125	141	157	173	189	205	221	237	253	269	285	301	317	333
L ₂	100.0	125.0	137.5	150.0	162.5	187.5	200.0	212.5	225.0	250.0	262.5	275.0	300.0	312.5	325.0				
L ₃	87.5	112.5	125.0	137.5	150.0	175.0	187.5	200.0	212.5	237.5	250.0	262.5	287.5	300.0	312.5				

Dimensions

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



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



4SA/B0

4SA/B1

4GA/B

MN4GA/B

4GA/B
(master)

MN3S0/
MN4S0

4TB

4L2-4/
LMF0

4KA/B

4F

PV5/
CMF

3MA/B0

3PA/B

P/M/B

NP/NAP/
NVP

4F**0E

HMV/
HSV

Uniwire
system

SKH


PCD/
FS/FD

3 5 port pilot operated valve
Individual wiring manifold

M4GA3 Series

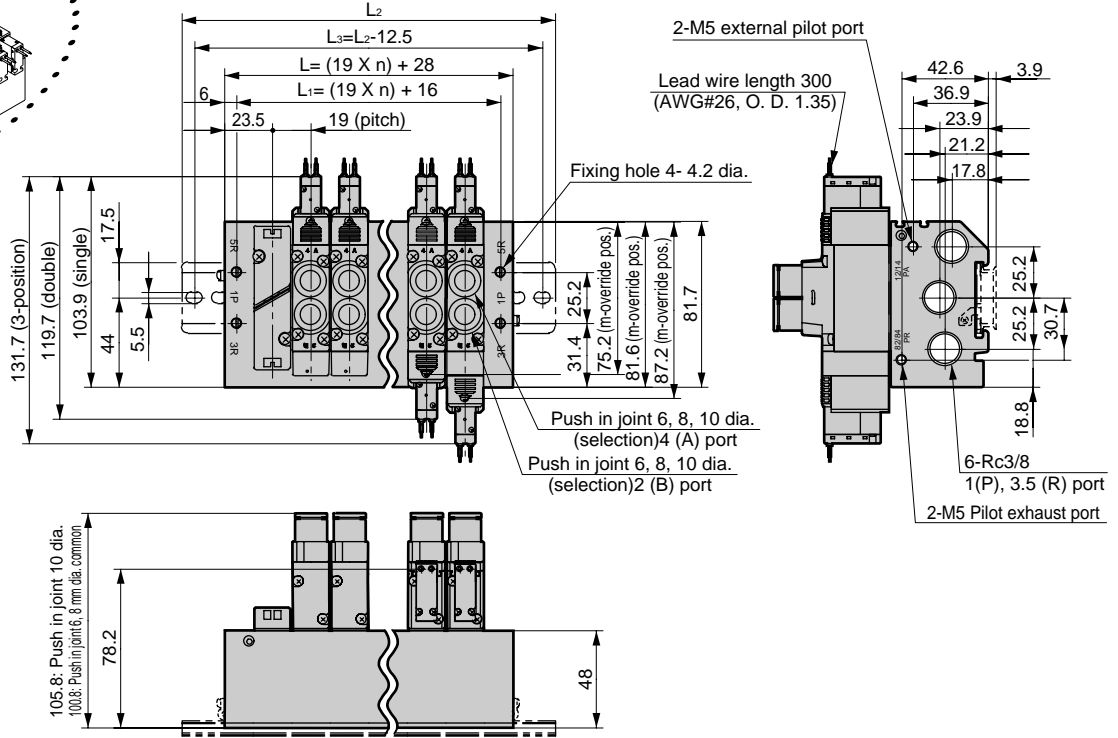
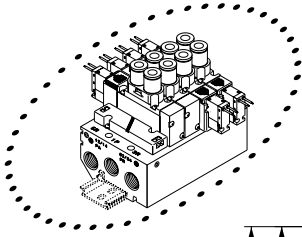
Individual wiring type manifold: Body porting

Dimensions

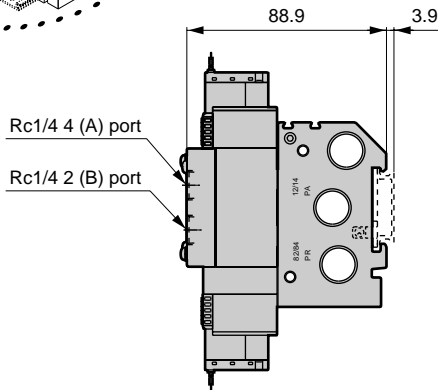
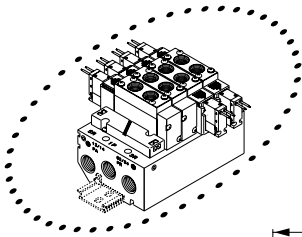
M4GA3  (File name: Page 240 or Ending 16)

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

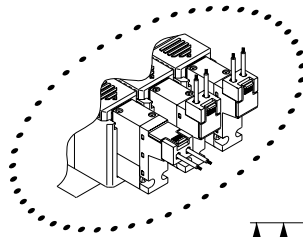
• For M3GA3, either Port A or B is blanking plug.



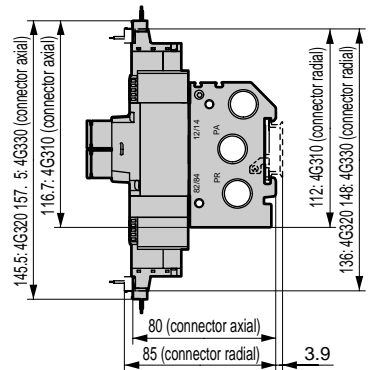
- External pilot (K)
- Rc1/4 female thread type(08)



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



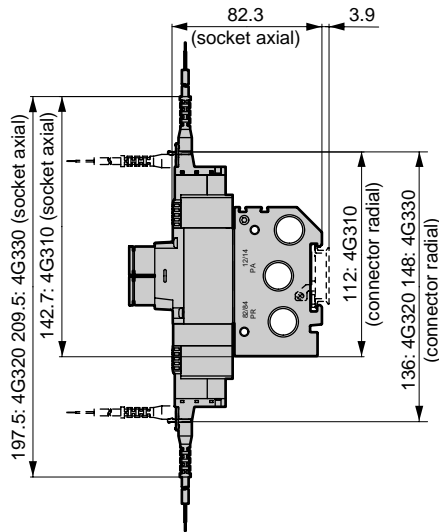
Note. Dimensions of DC specifications are shown.
When AC100V, valve overall length is single: 3.5mm longer while double/3-position: 7 mm longer.



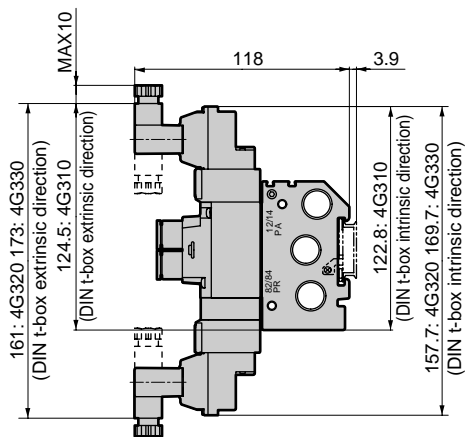
Station #	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389	408
L ₁	54	73	92	111	130	149	168	187	206	225	244	263	282	301	320	339	358	377	396
L ₂	112.5	125.0	150.0	175.0	187.5	212.5	225.0	250.0	262.5	287.5	300.0	325.0	337.5	362.5	375.0				
L ₃	100.0	112.5	137.5	162.5	175.0	200.0	212.5	237.5	250.0	275.0	287.5	312.5	325.0	350.0	362.5				

Dimensions

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



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



4SA/B0

4SA/B1

4GA/B

MN4GA/B

4GA/B
(master)

MN3S0/
MN4S0

4TB

4L2-4/
LMF0

4KA/B

4F

PV5/
CMF

3MA/B0

3PA/B

P/M/B

NP/NAP/
NVP

4F**0E

HMV/
HSV

Uniwire
system

SKH

PCD/
FS/FD

3 5 port pilot operated valve
Individual wiring manifold