

M3KA1/M4KA1 to 4 Series

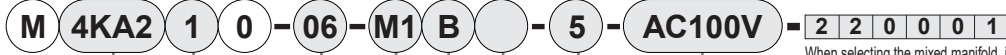
Individual wiring manifold: Body porting

How to order

● Discrete solenoid valve for manifold



● Manifold



A Model no. B Solenoid position

C Port size

D Manual override

E Electric connection
* Refer to page 781 for the circuit diagram of the type with surge suppressor and light.

<Table 1> Small terminal box L/L2/LS table

Symbol	Descriptions	3KA1	4KA1	4KA2	4KA3	4KA4	Surge suppressor
L	No lead wire	With light AC	●	●	●	●	
		DC			●	●	
	With surge suppressor/light	AC	●	●	●		
		DC	●	●	●		Integrated
L2	With lead wire (300 mm)	With light AC	●	●	●		
		DC					
	With surge suppressor/light	AC	●	●	●		
		DC	●	●	●		Integrated
4F*0E	No lead wire	With surge suppressor/light AC	●	●	●	●	Integrated
		DC			●	●	Integrated

Note on model no. selection

Note 1: If the changeover position class is mixed (8), indicate details of the combination at the end of the model. Refer to the following page.

Note 2: 3KA1, 4KA1 and 4KA2 compact terminal box, L and L2 DC voltage, and LS have a built-in surge absorber.

Note 3: With a 24 VDC or less grommet lead wire, the enclosed surge suppressor is a suppression connector. (Refer to page 780)

<Example of model number>

M4KA210-06-M1B-2-AC100V

- A Model : M4KA2
- B Solenoid position: 2-position single solenoid
- C Port size : Rc1/8
- D Manual override : Locking manual override
- E Electric connection : Small terminal box, w/o lead wire
- F Other options : None
- G Station number : 2 stations
- H Voltage : 100 VAC 50/60Hz

Symbol	Descriptions	3KA1	4KA1	4KA2	4KA3	4KA4
1	2-position single solenoid		●	●	●	●
2	2-position double solenoid	●	●	●	●	●
3	3-position all ports closed		●	●	●	●
4	3-position A/B/R connection		●	●	●	●
5	3-position P/A/B connection		●	●	●	●
1	2-position single solenoid normally closed	●				
11	2-position single solenoid normally open	●				
8	Mix manifold Note 1	●	●	●	●	●

Port	A/B port	P/R1/R2 port			
		(1)=Rc1/8	(2)=Rc1/4	(3)=Rc3/8	(4)=Rc1/2
M5	M5				
06	Rc1/8			(2)	
08	Rc1/4				(3)
10	Rc3/8				(4)
GS4	ø4 push-in joint	(1)	(1)		
GS6	ø6 push-in joint	(1)	(1)	(2)	
GS8	ø8 push-in joint			(2)	(3)
GS10	ø10 push-in joint			(3)	(4)
GS12	ø12 push-in joint				(4)

D	Blank	Non-locking manual override	3KA1	4KA1	4KA2	4KA3	4KA4
M1	Locking manual override		●	●	●	●	●

E	Blank	Grommet lead wire (300 mm)	3KA1	4KA1	4KA2	4KA3	4KA4
B	No lead wire		●	●	●	●	●
L	No lead wire		●	●	●	●	●
L2	Lead wire length (300 mm)		●	●	●	●	●
LS	No lead wire with surge suppressor/light		●	●	●	●	●

C-connector (lead wire lateral)		3KA1	4KA1	4KA2	4KA3	4KA4
C	Lead wire length (300 mm)	●	●	●	●	●
C00	Lead wire length (500 mm)	●	●	●	●	●
C01	Lead wire length (1000 mm)	●	●	●	●	●
C02	Lead wire length (2000 mm)	●	●	●	●	●
C03	Lead wire length (3000 mm)	●	●	●	●	●
C1	No lead wire	●	●	●	●	●
C2	Lead wire length (300 mm) with surge suppressor/light	●	●	●	●	●
C20	Lead wire length (500 mm) with surge suppressor/light	●	●	●	●	●
C21	Lead wire length (1000 mm) with surge suppressor/light	●	●	●	●	●
C22	Lead wire length (2000 mm) with surge suppressor/light	●	●	●	●	●
C23	Lead wire length (3000 mm) with surge suppressor/light	●	●	●	●	●
C3	No lead wire with surge suppressor/light	●	●	●	●	●

D-connector (lead wire upward)		3KA1	4KA1	4KA2	4KA3	4KA4
D	Lead wire length (300 mm)	●	●	●	●	●
D00	Lead wire length (500 mm)	●	●	●	●	●
D01	Lead wire length (1000 mm)	●	●	●	●	●
D02	Lead wire length (2000 mm)	●	●	●	●	●
D03	Lead wire length (3000 mm)	●	●	●	●	●
D1	No lead wire	●	●	●	●	●
D2	Lead wire length (300 mm) with surge suppressor/light	●	●	●	●	●
D20	Lead wire length (500 mm) with surge suppressor/light	●	●	●	●	●
D21	Lead wire length (1000 mm) with surge suppressor/light	●	●	●	●	●
D22	Lead wire length (2000 mm) with surge suppressor/light	●	●	●	●	●
D23	Lead wire length (3000 mm) with surge suppressor/light	●	●	●	●	●
D3	No lead wire with surge suppressor/light	●	●	●	●	●

F	Blank	No option	3KA1	4KA1	4KA2	4KA3	4KA4
S	Surge suppressor attached Note 3		●	●	●	●	●

G	2 to 12	2 to 12 stations	3KA1	4KA1	4KA2	4KA3	4KA4
	2 to 15	2 to 15 stations					
	2 to 20	2 to 20 stations	●	●	●	●	●

Voltage	H	AC100V	100 VAC 50/60Hz	Option	Standard	3KA1	4KA1	4KA2	4KA3	4KA4
						AC200V	200 VAC 50/60Hz	●	●	●
DC24V	24 VDC	●	●	●	●	●				
AC110V	110 VAC 50/60Hz	●	●	●	●	●				
AC220V	220 VAC 50/60Hz	●	●	●	●	●				
DC12V	12 VDC	●	●	●	●	●				

How to order masking plate kit

M 4KA180 - MP-KIT

* Gasket and set screw attached

A Model no.

A Model no.
4KA180
4KA280
4KA380
4KA480

How to order mix manifold

· 3 port valve

M 3KA1 8 0 - M5 - 4 - AC100V -

S10	S11	S20	MP
3	0	0	1

S10 = 1 to 3 MP = 4

· 5 port valve

M 4KA3 8 0 - 06 - 7 - AC100V -

S1	S2	S3	S4	S5	MP
2	2	2	1	0	0

S1 = 1, 6 S2 = 2, 5 S3 = 3, 4 S4 = 7

Mix manifold "8"

* Refer to previous page for the others

How to Order Mixed Manifold Models

(1) Indicate the quantity for each function (solenoid position) at the end of the model.

Functions and symbols are indicated below.

S1	S2	S3	S4	S5	MP
2	2	2	1	0	0

Indicate the quantity.

Example: 5 port valve 2-position single solenoid → S1

· 3 port valve

Symbol	Function (solenoid position)
S10	3 port valve 2-position single solenoid N.C. type
S11	3 port valve 2-position single solenoid N.O. type
S20	3 port valve 2-position double solenoid
MP	Masking plate

· 5 port valve

Symbol	Function (solenoid position)
S1	2-position single solenoid
S2	2-position double solenoid
S3	3-position all ports closed
S4	3-position A/B/R connection
S5	3-position P/A/B connection
MP	Masking plate

(2) Indicate the function (solenoid position) and layout position in the Remarks field.

Solenoid position symbol = ○, ○ th station (Facing the piping port. The 1st station is at left.)

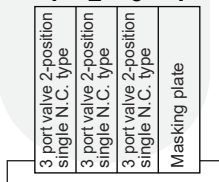
Example: S10 = 1 to 3 (1st to 3rd station are the 3 port valve 2-position single solenoid N.C. type.)

S1 = 1, 6 (1st, 6th station are the 5 port valve 2-position single solenoid.)

(Example of model number 1)

For 3 port valve 4 stations

1 2 3 4 Layout



S10 S10 S10 MP Symbol

3 port valve 2-position single solenoid (S10) : 3 piece (1st to 3rd station)
Masking plate (MP) : 1 piece (4th station)



M3KA180-M5-4-100 VAC -

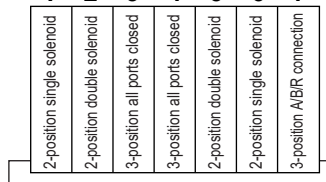
S10	S11	S20	MP
3	0	0	1

S10 = 1 to 3 MP = 4

(Example of model number 2)

For 5 port valve 7 stations

1 2 3 4 5 6 7 Layout



S1 S2 S3 S3 S2 S1 S4 Symbol

2-position single solenoid (S1) : 2 piece (1st and 6th station)
2-position double solenoid (S2) : 2 piece (2nd and 5th station)
3-position all ports closed (S3) : 2 piece (3rd and 4th station)
3-position A/B/R connection (S4) : 1 piece (7th station)



M4KA380-06-7-100 VAC -

S1	S2	S3	S4	S5	MP
2	2	2	1	0	0

S1 = 1, 6 S2 = 2, 5 S3 = 3, 4 S4 = 7

MN3E0
MN4E0

4GA/B

M4GA/B

MN4GA/B

4GA/B
(Master)

W4GA/B2

W4GB4

MN3S0
MN4S0

4TB

4L2-4/
LMF0

4SA/B0

4SA/B1

4KA/B

4F

PV5G/
CMF

PV5/
CMF

3MA/B0

3PA/B

P/M/B

NP/NAP/
NVP

4F*0E

HMV
HSV

2QV
3QV

SKH

PCD/
FS/FD

Ending

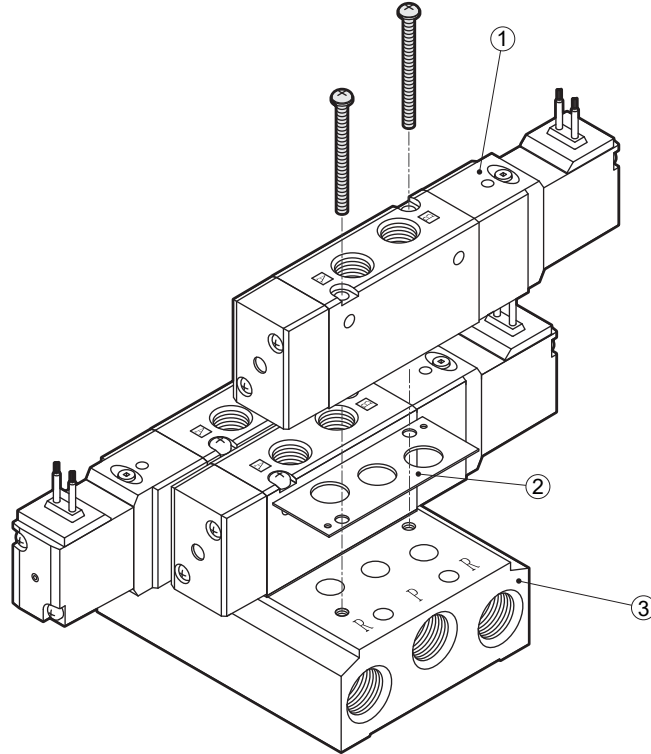
Individual wiring manifold
3, 5 port pilot operated valve

M3KA1/M4KA1 to 4 Series

Individual wiring manifold: Body porting

Manifold components explanation and parts

MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B
(Master)
W4GA/B2
W4GB4
MN3S0
MN4S0
4TB
4L2-4/
LMFO
4SA/B0
4SA/B1
4KA/B



Main parts list

No.	Component name	Model no. (example)	Descriptions
1	Discrete solenoid valve	4KA219-06-DC24V	Discrete solenoid valve 2 set screws Gasket
2	Gasket kit	M4KA210-GASKET-KIT	Gasket 2 set screws
3	Manifold sub-plate kit	M4KA210-06-3-SUB-BASE-KIT	Manifold sub-plate 2 set screws Gasket

Repair parts list

No.	Parts name	Model no.	Applicable model	No.	Parts name	Model no.	Applicable model
-	Coil assembly	4K1L- ** -COIL- *	3KA1	-	Piston assembly	4K9- *	3KA11(1)0, 4KA110
		Electric connection Voltage	4KA1			└ 151	3KA120, 4KA120
			4KA2				4KA130
						152	4KA140
			4KA150				
			153			4KA210	
						4KA220	
						4KA230	
						154	4KA240
							4KA250
						137	4KA310, 4KA320
							4KA330
						138	4KA340
							4KA350
						144	4KA410, 4KA420
							4KA430
				145	4KA440		
					4KA450		
-	Spool assembly	4K9- *	3KA11(1)0, 4KA110				
		└ 110					
			118	3KA120, 4KA120			
			111	4KA130			
			112	4KA140			
			113	4KA150			
			150	4KA210			
			126	4KA220			
			127	4KA230			
			128	4KA240			
			129	4KA250			
			133	4KA310, 4KA320			
			134	4KA330			
	135	4KA340					
	136	4KA350					
	140	4KA410, 4KA420					
	141	4KA430					
	142	4KA440					
	143	4KA450					

M3KA1/M4KA1 Series

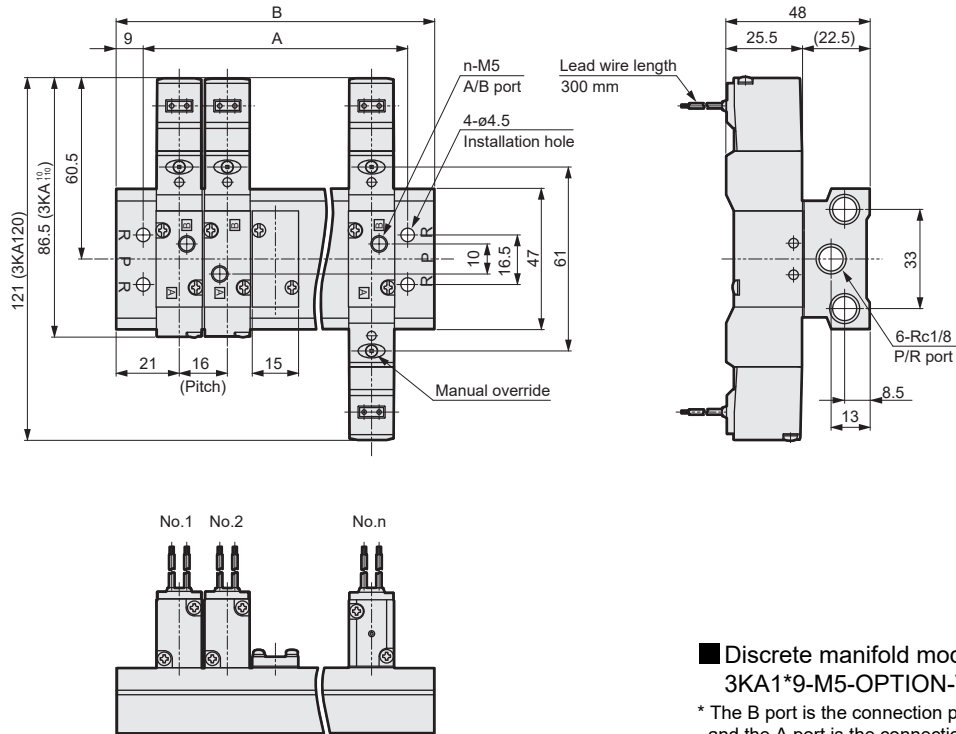
Individual wiring manifold: Body porting

Dimensions



M3KA1-M5

● 3-port valve / port size M5: Grommet lead wire

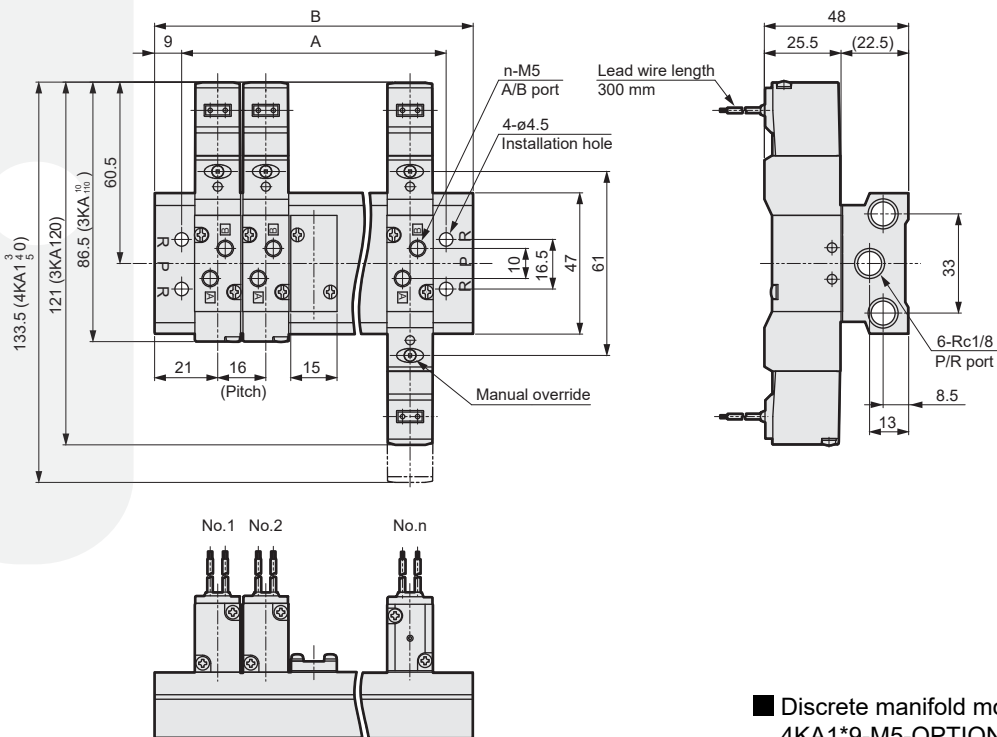


■ Discrete manifold model no.
3KA1*9-M5-OPTION-VOLTAGE

* The B port is the connection port for 3KA119-M5
and the A port is the connection port for
3KA1119-M5.

M4KA1-M5

● 5 port valve / port size M5: Grommet lead wire



■ Discrete manifold model no.
4KA1*9-M5-OPTION-VOLTAGE

Station number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328
B	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330	346

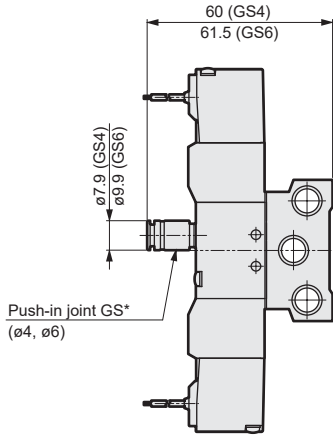
M3KA1/M4KA1 Series

Individual wiring manifold: Body porting

Dimensions

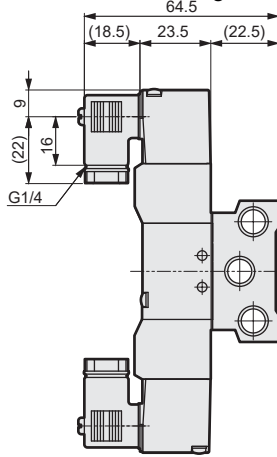
M3KA1 (3 port valve)

- $\varnothing 4$, $\varnothing 6$ push-in joint: (GS4, GS6)

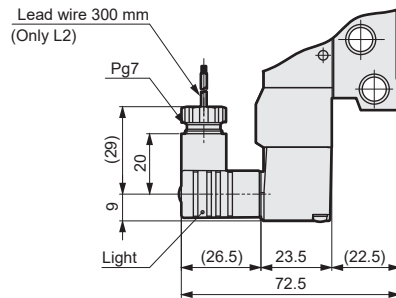


- Small terminal box: (B, L, L2, LS)

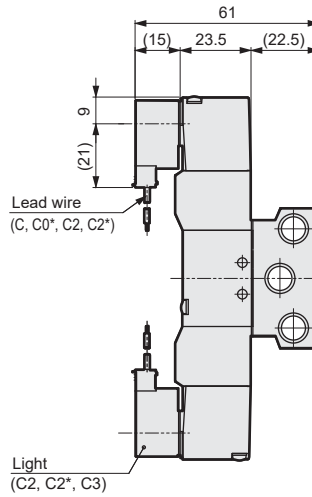
Without indicator light



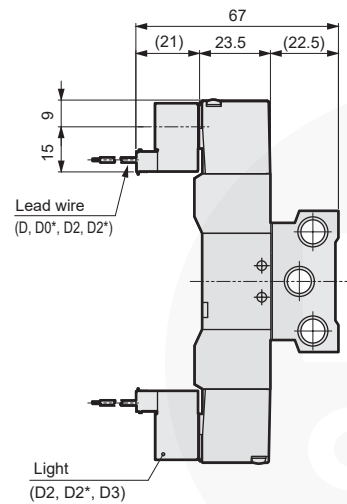
With indicator light



- C-connector: (C, C1, C0*, C2, C2*, C3)

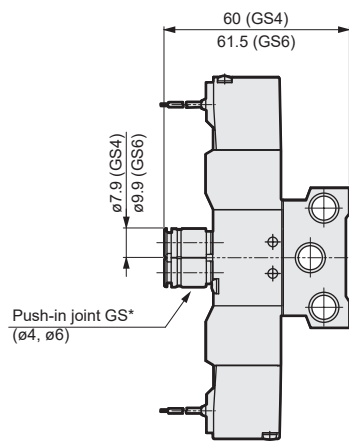


- D-connector: (D, D1, D0*, D2, D2*, D3)



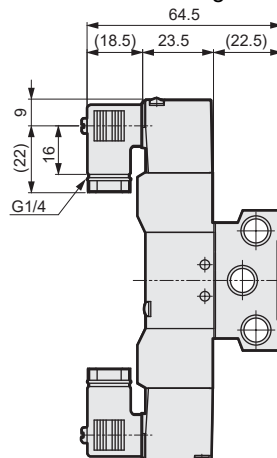
M4KA1 (5 port valve)

- $\varnothing 4$, $\varnothing 6$ push-in joint: (GS4, GS6)

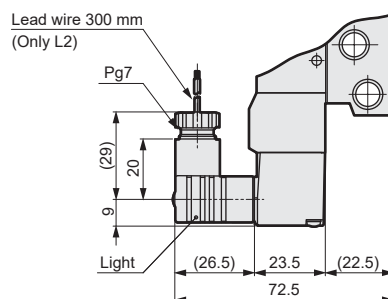


- Small terminal box: (B, L, L2, LS)

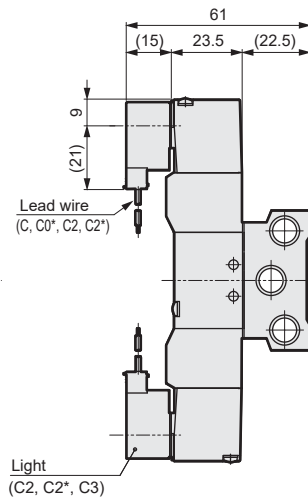
Without indicator light



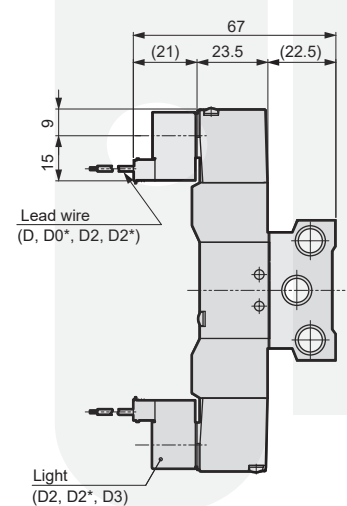
With indicator light



- C-connector: (C, C1, C0*, C2, C2*, C3)



- D-connector: (D, D1, D0*, D2, D2*, D3)



MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B (Master)
W4GA/B2
W4GB4
MN3S0
MN4S0
4TB
4L2-4/LMF0
4SA/B0
4SA/B1
4KA/B
4F
PV5G/CMF
PV5/CMF
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*OE
HMV
HSV
2QV
3QV
SKH
PCD/FS/FD
Ending

Individual wiring manifold
3, 5 port pilot operated valve

M4KA2/M4KA3 Series

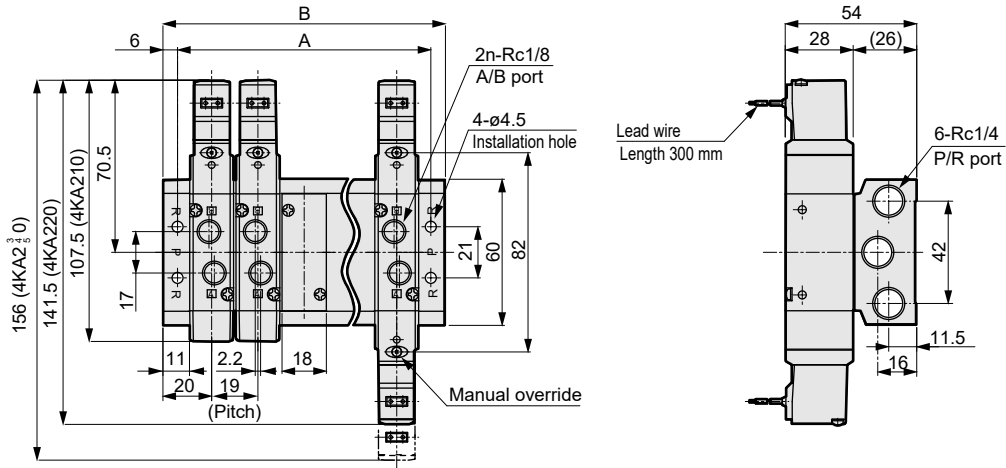
Individual wiring manifold: Body porting



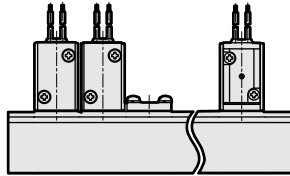
Dimensions

M4KA2-06

● Port size Rc1/8: Grommet lead wire



Station number No. 1 No. 2 No. 3 ... No. n

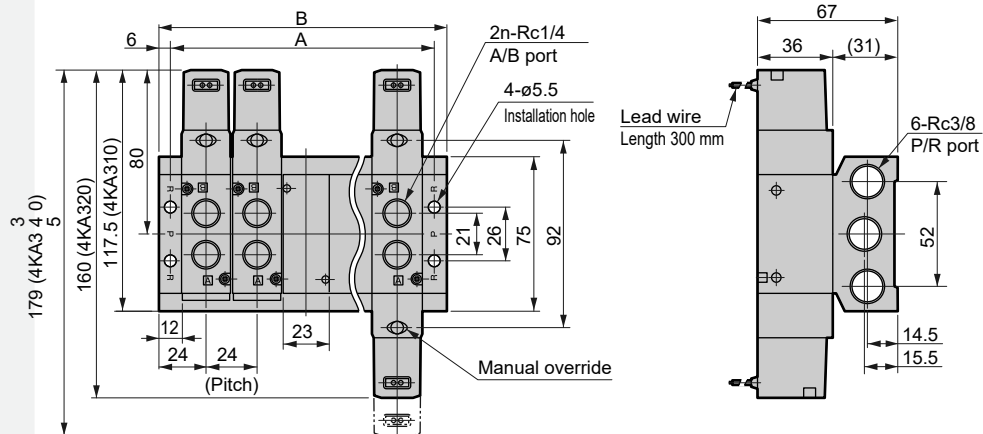


■ Discrete manifold model no.
4KA2*9-06-OPTION-VOLTAGE

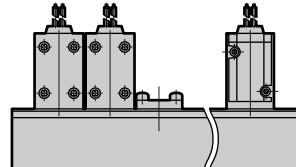
Station number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	47	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389
B	59	78	97	116	135	154	173	192	211	230	249	268	287	306	325	344	363	382	401

M4KA3-08

● Port size Rc1/4: Grommet lead wire



No.1 No.2 No.3 ... No.n



■ Discrete manifold model no.
4KA3*9-08-OPTION-VOLTAGE

Station number	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	60	84	108	132	156	180	204	228	252	276	300	324	348	372
B	72	96	120	144	168	192	216	240	264	288	312	336	360	384

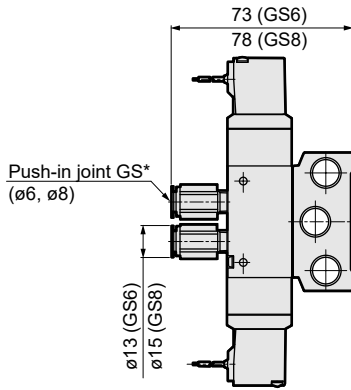
M4KA2/M4KA3 Series

Individual wiring manifold: Body porting

Dimensions

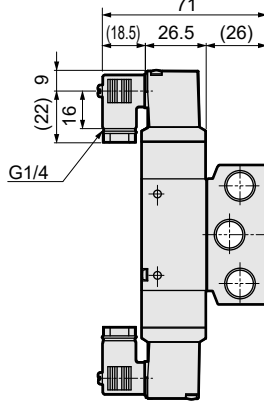
M4KA2

● $\varnothing 6$, $\varnothing 8$ push-in joint:
(GS6, GS8)

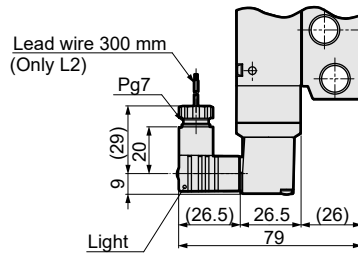


● Small terminal box:
(B, L, L2, LS)

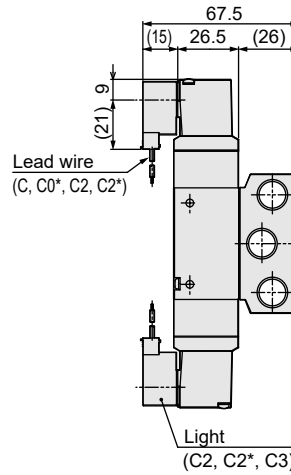
Without indicator light



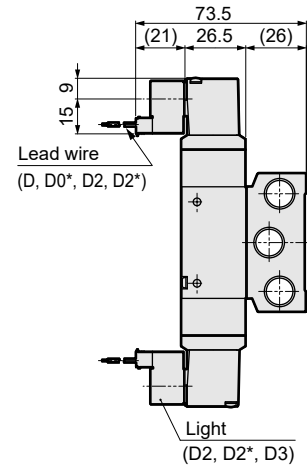
With indicator light



● C-connector:
(C, C1, C0*, C2, C2*, C3)

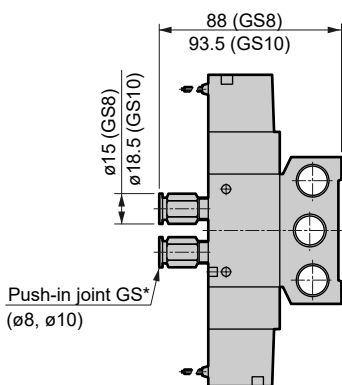


● D-connector:
(D, D1, D0*, D2, D2*, D3)

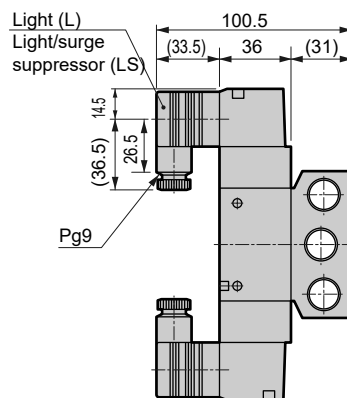


M4KA3

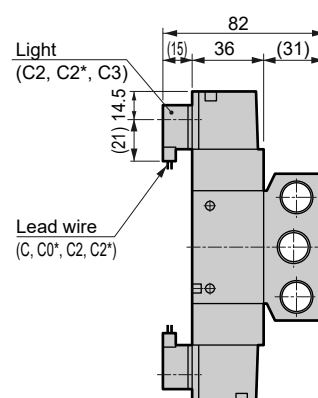
● $\varnothing 8$, $\varnothing 10$ push-in joint:
(GS8, GS10)



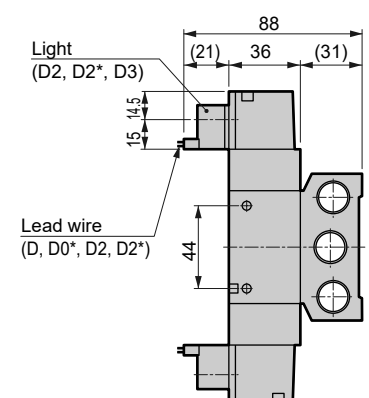
● Small terminal box:
(B, L, L2, LS)



● C-connector:
(C, C1, C0*, C2, C2*, C3)



● D-connector:
(D, D1, D0*, D2, D2*, D3)



MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B (Master)
W4GA/B2
W4GB4
MN3S0
MN4S0
4TB
4L2-4/LMF0
4SA/B0
4SA/B1
4KA/B
4F
PV5G/CMF
PV5/CMF
3MA/B0
3PA/B
P/M/B
NPN/NP/NVP
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD/FS/FD
Ending

Individual wiring manifold
3, 5 port pilot operated valve

M4KA4 Series

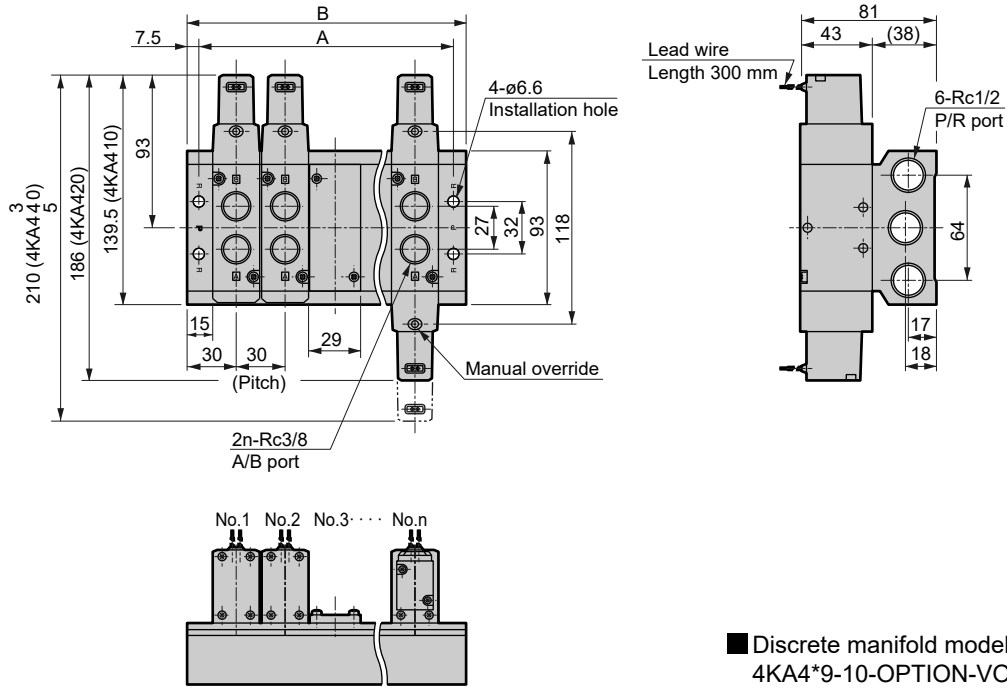
Individual wiring manifold: Body porting



Dimensions

M4KA4-10

● Port size Rc3/8: Grommet lead wire



■ Discrete manifold model no.
4KA4*9-10-OPTION-VOLTAGE

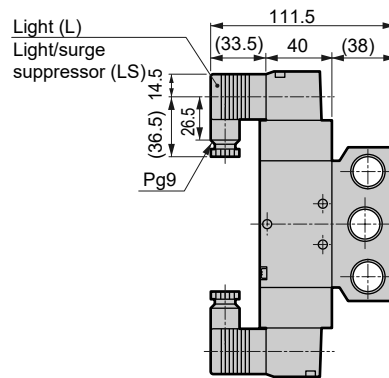
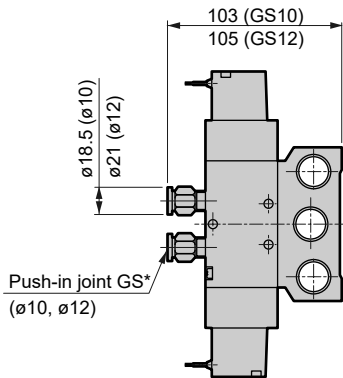
Station number	2	3	4	5	6	7	8	9	10	11	12
A	75	105	135	165	195	225	255	285	315	345	375
B	90	120	150	180	210	240	270	300	330	360	390

Dimensions

M4KA4

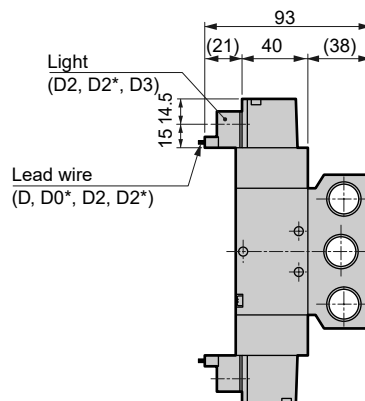
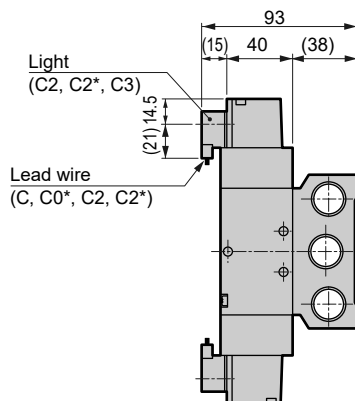
- Push-in joint $\phi 10$, $\phi 12$:
(GS10, GS12)

- Small terminal box:
(B, L, LS)



- C-connector:
(C, C1, C0*, C2, C2*, C3)

- D-connector:
(D, D1, D0*, D2, D2*, D3)



MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B (Master)
W4GA/B2
W4GB4
MN3S0
MN4S0
4TB
4L2-4/LMF0
4SA/B0
4SA/B1
4KA/B
4F
PV5G/CMF
PV5/CMF
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD/FS/FD
Ending

Individual wiring manifold
3, 5 port pilot operated valve