

MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B (Master)
W4GB2
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/INAP/NVP
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD/FS/FD
Ending



Discrete valve body porting

3, 5 port pilot operated valve pneumatic valve

3KA1, 4KA1/2/3/4 Series

● Applicable cylinder bore size: ø20 to ø160

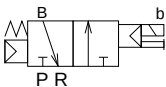


Refer to Intro 17 for details.



JIS symbol

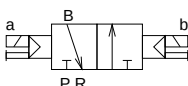
- 3 port valve
2-position single N.C. type



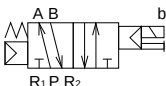
- 3 port valve
2-position single N.O. type



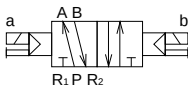
- 3 port valve
2-position double solenoid



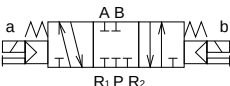
- 5 port valve
2-position single solenoid



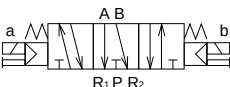
- 5 port valve
2-position double solenoid



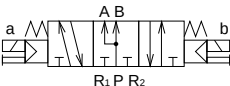
- 5 port valve
3-position all ports closed



- 5 port valve
3-position A/B/R connection



- 5 port valve
3-position P/A/B connection



Common specifications

Descriptions	
Type of valve/operation method	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.70
Min. working pressure MPa	Refer to the following individual specifications.
Withstanding pressure MPa	1.05
Ambient temperature °C	-5 to 50 (no freezing)
Fluid temperature °C	5 to 50
Lubrication	Not required
Protective structure	Dust proof
Vibration/impact m/s ²	50 or less / 300 or less
Working environment	Containing corrosive gas is impermissible.

Electric specifications

Descriptions		3KA1, 4KA1/2	4KA3/4
Rated voltage V	AC	100, 200 (50/60 Hz)	
	DC	24	
Rated voltage fluctuation range		±10%	
Starting current A	AC 100 V	0.056/0.044	0.046/0.042
	AC 200 V	0.028/0.022	0.023/0.021
	DC 24 V	—	
	DC 24 V	—	
Holding current A	AC 100 V	0.028/0.022	0.023/0.021
	AC 200 V	0.014/0.011	
	DC 24 V	0.075	
	DC 24 V	0.075	
Power consumption W Value in () are with indicator light	AC 100 V	1.8 / 1.4 (1.8 / 1.5)	1.6 / 1.3 (1.8 / 1.5)
	AC 200 V	1.8 / 1.4 (1.8 / 1.5)	1.6 / 1.3 (1.8 / 1.5)
	DC 24 V	1.8 (2.0)	
	DC 24 V	1.8 (2.0)	
Heat proof class		B (molded coil)	
Temperature rise °C		43	30

Remarks: The 100 VAC 50/60 Hz rated voltage can be used at 110 VAC 60 Hz, and 200 VAC 50/60 Hz can be used at 220 VAC 60 Hz.

Individual specifications

Descriptions		3KA1	4KA1	4KA2	4KA3	4KA4
Min. working pressure MPa	2-position	Single solenoid	0.15	0.15	0.15	0.15
	3-position	-	0.20	0.20	0.20	0.20
Port size Note 1	P/A/B port	Push-in joint ø4, ø6	Push-in joint ø4, ø6	Push-in joint ø6, ø8	Push-in joint ø8, ø10	Push-in joint ø10, ø12
	R1/R2 port	M5	M5	Rc1/8	Rc1/4	Rc3/8
Response time Note 2 ms	2-position	30 or less	30 or less	30 or less	30 or less	30 or less
	3-position	-	60 or less	60 or less	60 or less	60 or less
Weight g	2-position	Single solenoid	70	115	214	325
		Double solenoid	110	155	315	435
	3-position	-	120	170	354	505

Note 1: G threads and NPT threads are available for the piping port threads. Contact CKD for information.

Note 2: Response time is the value when supply pressure 0.5 MPa, not lubricated and ON. The value varies depending on pressure and quality of lubricant.

Flow characteristics

Model no.	Solenoid position		C (dm ³ / (s·bar))	b
3KA1	2-position		0.65	0.37
4KA1	2-position		0.65	0.37
	3-position	All ports closed	0.60	0.32
		A/B/R connection	0.68	0.39
		P/A/B connection	0.61	0.36
4KA2	2-position		2.6	0.43
	3-position	All ports closed	2.3	0.43
		A/B/R connection	2.9	0.34
		P/A/B connection	2.3	0.42
4KA3	2-position		5.6	0.49
	3-position	All ports closed	4.1	0.60
		A/B/R connection	4.1	0.62
		P/A/B connection	4.2	0.68
4KA4	2-position		9.8	0.49
	3-position	All ports closed	8.2	0.54
		A/B/R connection	11	0.50
		P/A/B connection	8.4	0.54

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

Flow characteristics are the value when port size is M5 (3KA1, 4KA1), Rc1/8 (4KA2), Rc1/4 (4KA3) and Rc3/8 (4KA4).

Ozone proof specifications (Ending 5)

** - Voltage - P11

Coolant proof specifications

- Special structure with excellent oil proof and water proof properties

** - A - Voltage

Copper and PTFE free

- Copper and PTFE material not used for flow path

** - Voltage - P6

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

Discrete
3, 5 port pilot operated valve

3KA1/4KA1 to 4 Series

Discrete valve: Body porting

How to order

4KA2 1 0 - 06 - M1 B - AC100V

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
LS	No lead wire	With surge suppressor/light	AC	●	●	●	Integrated
		DC			●	●	Integrated

Note on model no. selection

Note 1: 3KA1, 4KA1 and 4KA2 compact terminal box, L and L2 DC voltage, and LS have a built-in surge absorber.

Note 2: 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>

4KA210-06-M1BP-AC100V

- A Model : 4KA2
 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 : Mounting plate
 G Voltage : 100 VAC 50/60Hz

F Other options

G Voltage

A Model no.		3KA1	4KA1	4KA2	4KA3	4KA4
Symbol	Descriptions					
B Solenoid position	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	●				
C Port size	11 2-position single solenoid normally open	●				
	Port	P/A/B port		R1/R2 port		
				(1) = M5 (2) = Rc1/8 (3) = Rc1/4 (4) = Rc3/8		
	M5	M5	(1)	(1)		
	06	Rc1/8			(2)	
	08	Rc1/4				(3)
D Manual override	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)
E Electric connection	Blank	Non-locking manual override	●	●	●	●
	M1	Locking manual override	●	●	●	●
	Grommet lead wire					
	Blank	Grommet lead wire (300 mm)	●	●	●	●
	Small terminal box					
	B	No lead wire	●	●	●	●
F Other options	L	No lead wire				
	L2	Lead wire length (300 mm)	Refer to <Table 1> on the left. Note 1			
	LS	No lead wire with surge suppressor/light				
	C-connector (lead wire lateral)					
	C	Lead wire length (300 mm)	●	●	●	●
	C00	Lead wire length (500 mm)	●	●	●	●
G Voltage	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	●	●	●	●
H Mounting plate	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)					
	D	Lead wire length (300 mm)	●	●	●	●
I Surge suppressor	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	●	●	●	●
J Standard	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 Other options					
K Voltage	Blank	No option	●	●	●	●
	P	Mounting plate (only 2-position single solenoid)	●	●	●	●
	S	Surge suppressor attached Note 2	●	●	●	●
	AC100V	100 VAC 50/60Hz	●	●	●	●
	AC200V	200 VAC 50/60Hz	●	●	●	●
	DC24V	24 VDC	●	●	●	●
L Option	AC110V	110 VAC 50/60Hz	●	●	●	●
	AC220V	220 VAC 50/60Hz	●	●	●	●
	DC12V	12 VDC	●	●	●	●

3KA1 Series

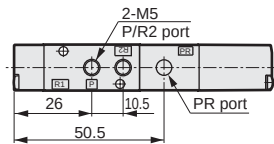
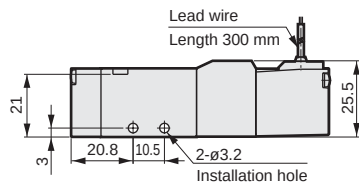
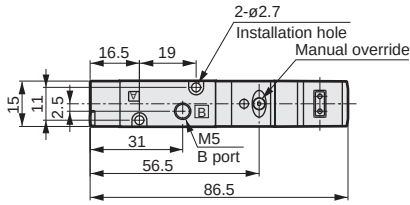
Discrete valve: Body porting

Dimensions

3KA110



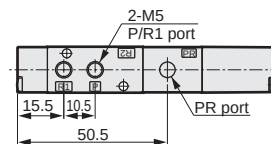
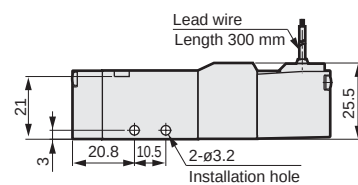
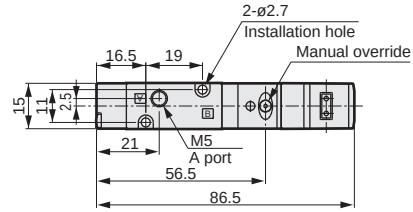
● 2-position single N.C. type: Grommet lead wire



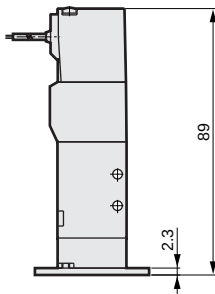
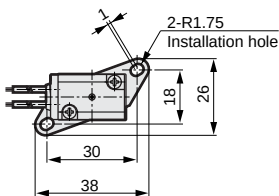
3KA1110



● 2-position single N.O. type: Grommet lead wire



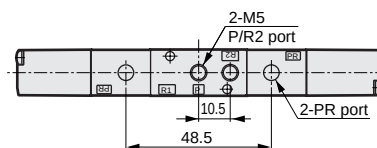
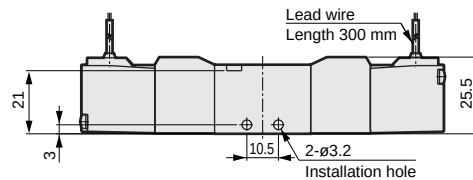
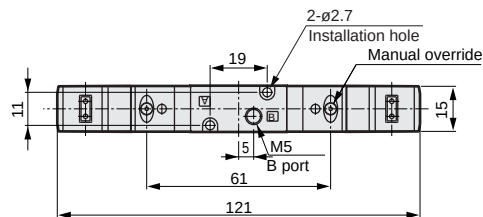
● Mounting plate: (P <Only 2-position single solenoid>)



3KA120

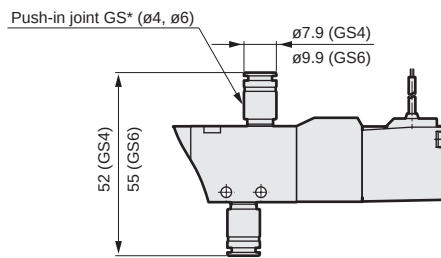


● 2-position double N.C. type: Grommet lead wire



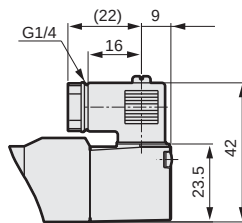
Dimensions

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

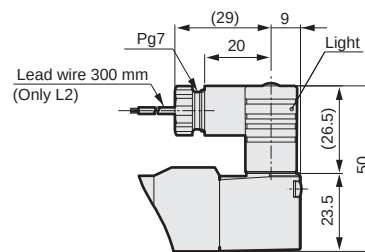


- Small terminal box: (B <without indicator light> , L, L2, LS <with indicator light>)

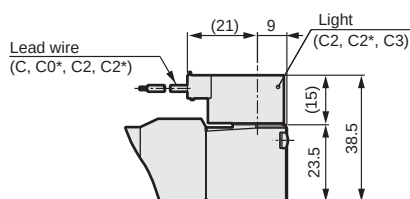
Without indicator light



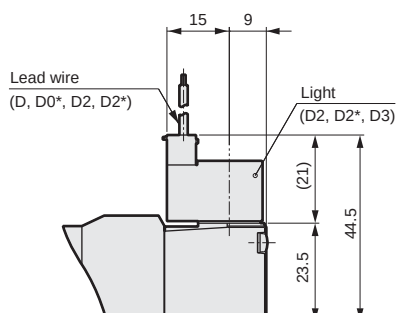
With indicator light



- 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*0E
HMV
HSV
2QV
3QV
SKH
PCD/ FS/FD
Ending

Discrete
3, 5 port pilot operated valve

4KA1 Series

Discrete valve: Body porting

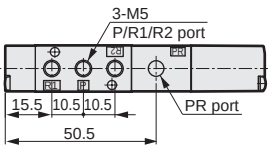
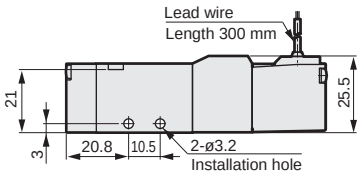
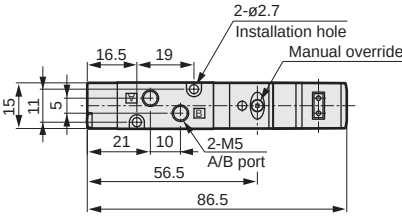
MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B (Master)
W4GA/B2
W4GB4
MN3S0
MN4S0
4TB
4L2-4/ LMFO
4SA/B0
4SA/B1
4KA/B
4F
PV5G/ CMF
PV5/ CMF
3MA/B0
3PA/B
P/M/B
NP/INAP/ NVP
4F*0E
HMV HSV
2QV 3QV
SKH
PCD/ FS/FD
Ending

Dimensions

4KA110



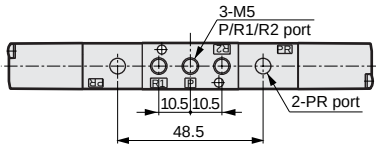
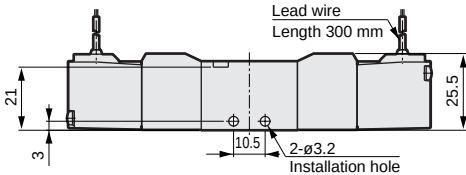
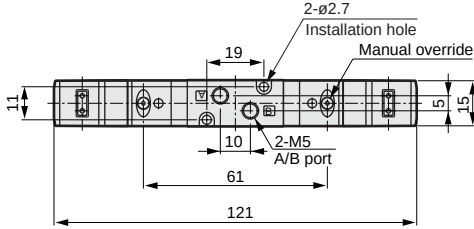
● 2-position single solenoid: Grommet lead wire



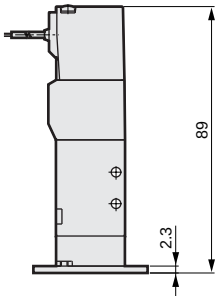
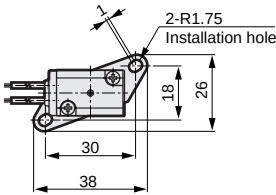
4KA120



● 2-position double solenoid: Grommet lead wire



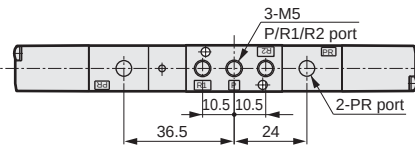
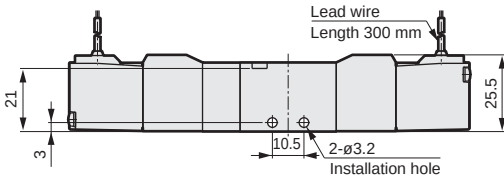
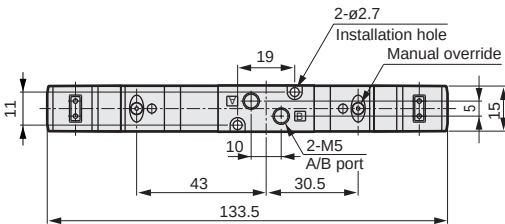
● Mounting plate: (P <Only 2-position single solenoid>)



4KA140

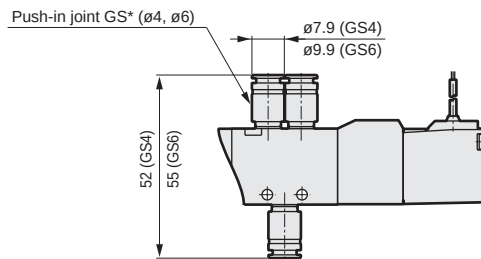


● 3-position: Grommet lead wire



Dimensions

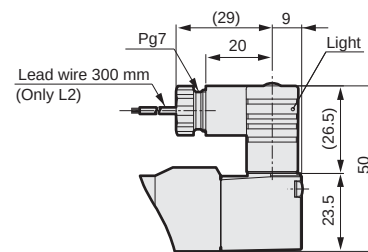
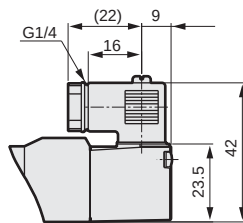
- $\varnothing 4/\varnothing 6$ push-in joint: (GS4, GS6)



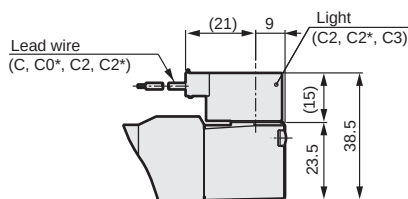
- Small terminal box: (B <without indicator light> , L, L2, LS <with indicator light>)

Without indicator light

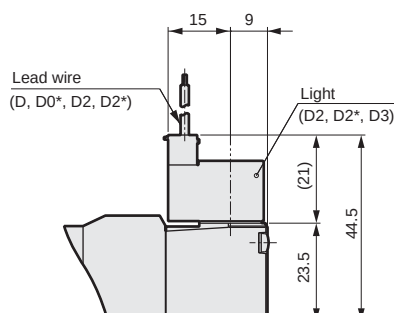
With indicator light



- 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*0E
HMV HSV
2QV 3QV
SKH
PCD/ FS/FD
Ending

Discrete
3, 5 port pilot operated valve

4KA2 Series

Discrete valve: Body porting

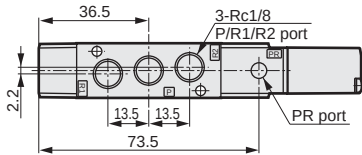
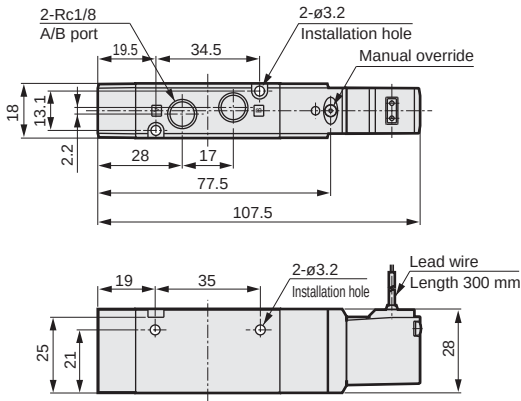
MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B (Master)
W4GA/B2
W4GB4
MN3S0
MN4S0
4TB
4L2-4/LMFO
4SA/B0
4SA/B1
4KA/B
4F
PV5G/CMF
PV5/CMF
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD/FS/FD
Ending

Dimensions

4KA210



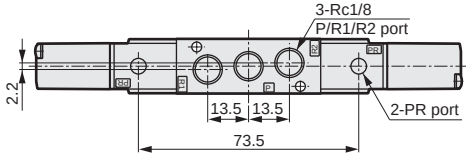
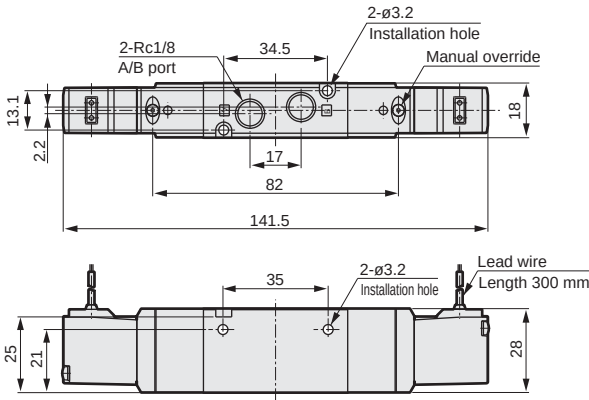
● 2-position single solenoid: Grommet lead wire



4KA220



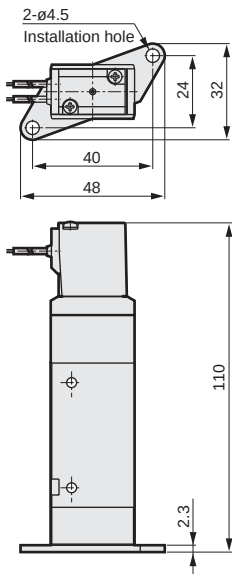
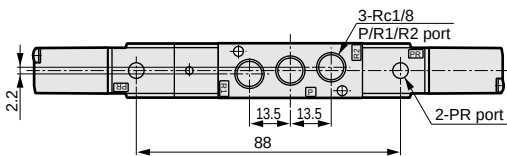
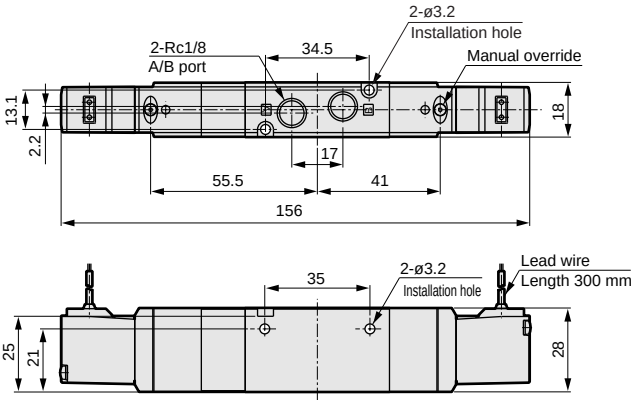
● 2-position double solenoid: Grommet lead wire



4KA240³₅

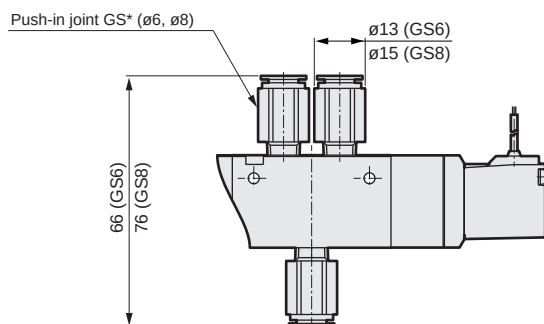


● 3-position: Grommet lead wire



Dimensions

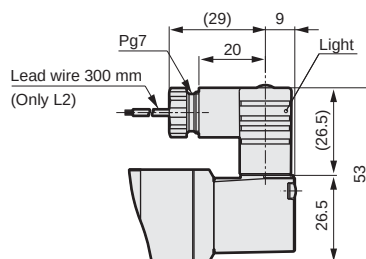
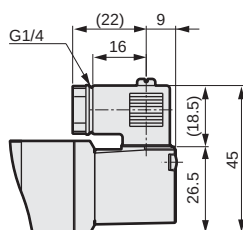
● $\varnothing 6/\varnothing 8$ push-in joint: (GS6, GS8)



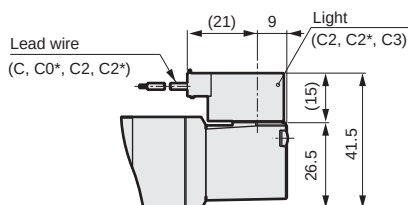
● Small terminal box: (B <without indicator light> , L, L2, LS <with indicator light>)

Without indicator light

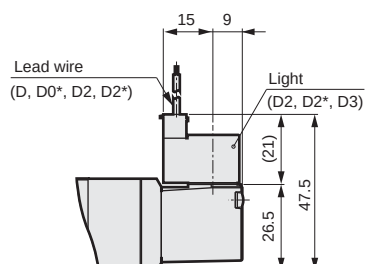
With indicator light



● 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*0E
HMV
HSV
2QV
3QV
SKH
PCD/ FS/FD
Ending

Discrete
3, 5 port pilot operated valve

4KA3 Series

Discrete valve: Body porting

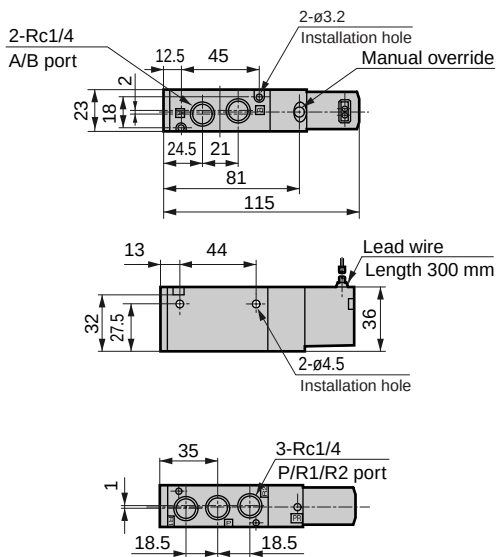
MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B (Master)
W4GA/B2
W4GB4
MN3S0
MN4S0
4TB
4L2-4/ LMFO
4SA/B0
4SA/B1
4KA/B
4F
PV5G/ CMF
PV5/ CMF
3MA/B0
3PA/B
P/M/B
NP/INP/ NVP
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD/ FS/FD
Ending

Dimensions

4KA310



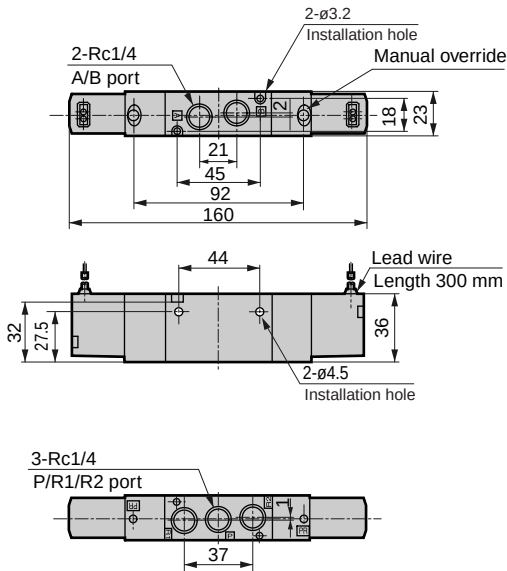
● 2-position single solenoid: Grommet lead wire



4KA320



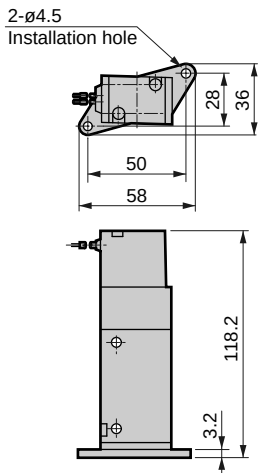
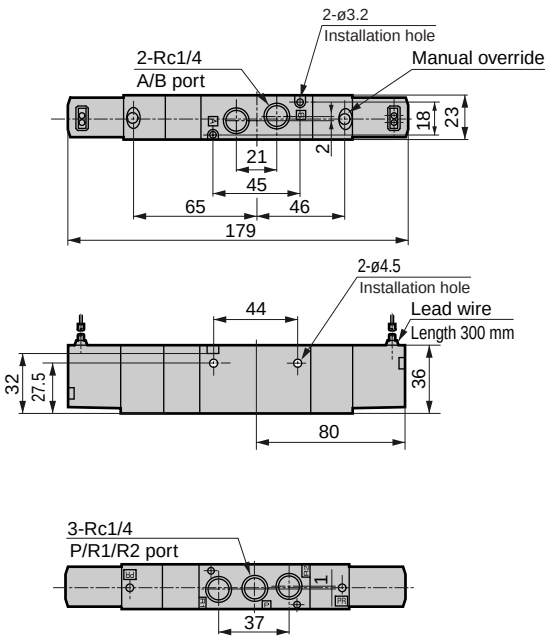
● 2-position double solenoid: Grommet lead wire



4KA340³₅

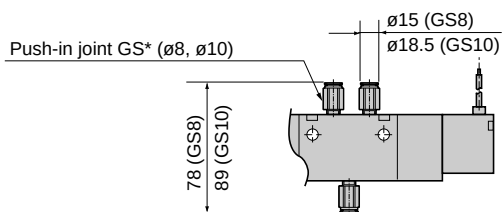


● 3-position: Grommet lead wire

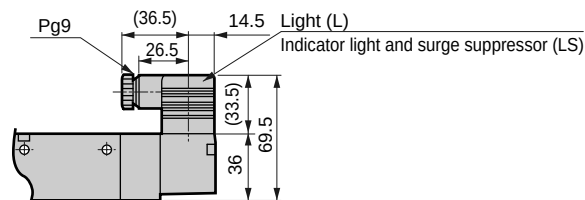


Dimensions

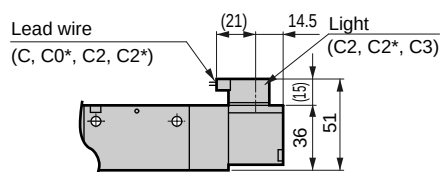
● $\varnothing 8/\varnothing 10$ push-in joint: (GS8, GS10)



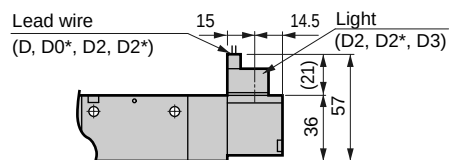
● Terminal box: (B, L, LS)



● 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

Discrete
3, 5 port pilot operated valve

4KA4 Series

Discrete valve: Body porting

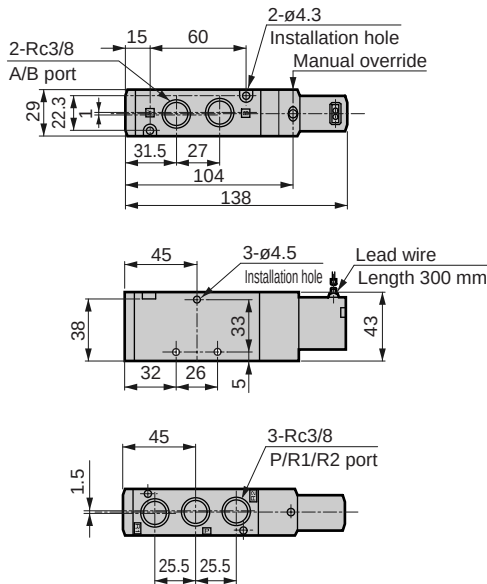
MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B (Master)
W4GA/B2
W4GB4
MN3S0
MN4S0
4TB
4L2-4/LMFO
4SA/B0
4SA/B1
4KA/B
4F
PV5G/CMF
PV5/CMF
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD/FS/FD
Ending

Dimensions

4KA410



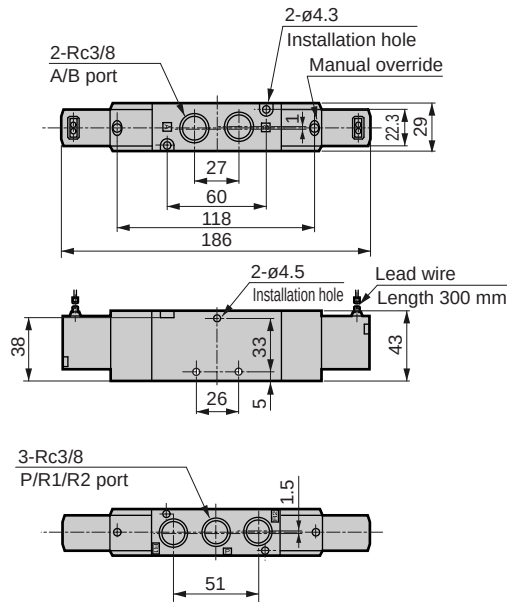
● 2-position single solenoid: Grommet lead wire



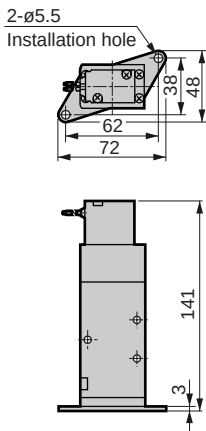
4KA420



● 2-position double solenoid: Grommet lead wire



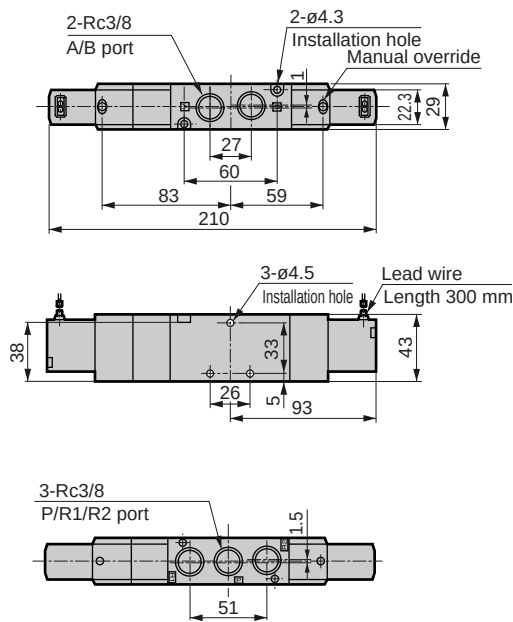
● Mounting plate: (P <Only 2-position single solenoid>)



4KA440³₅

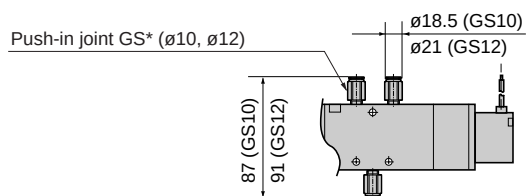


● 3-position: Grommet lead wire

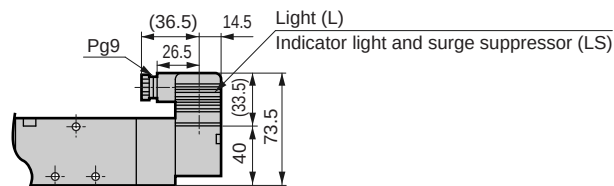


Dimensions

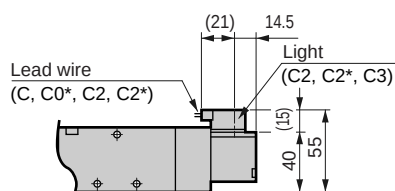
● $\varnothing 10/\varnothing 12$ push-in joint: (GS10, GS12)



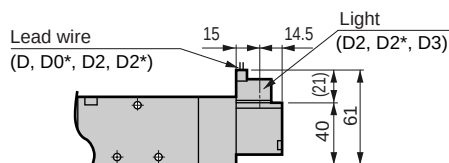
● Terminal box: (B, L, LS)



● 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

Discrete
3, 5 port pilot operated valve

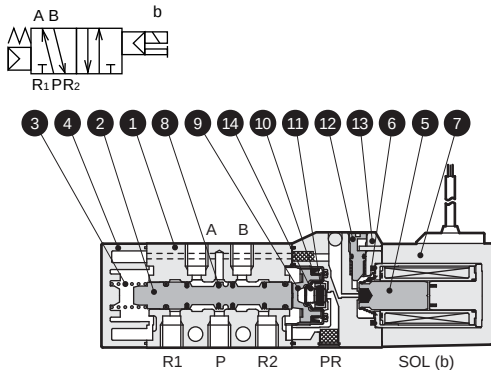
3KA1/4KA1 Series

Discrete valve: Body porting

Internal structure and parts list

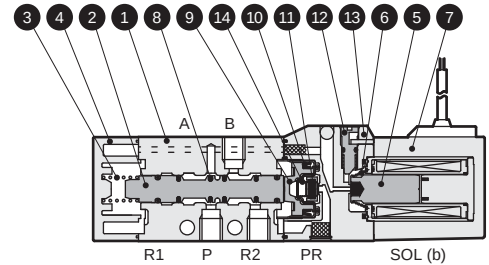
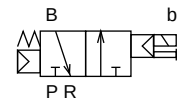
4KA110

● 2-position single solenoid



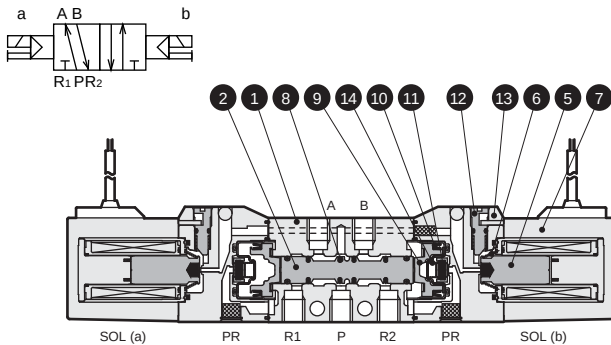
3KA110-NC

● 2-position single solenoid / N.C. type



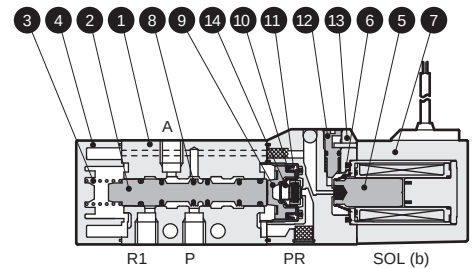
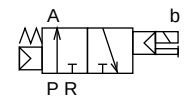
4KA120

● 2-position double solenoid



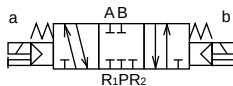
3KA1110-NO

● 2-position single solenoid / N.O. type



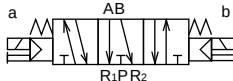
4KA130

● 3-position all ports closed



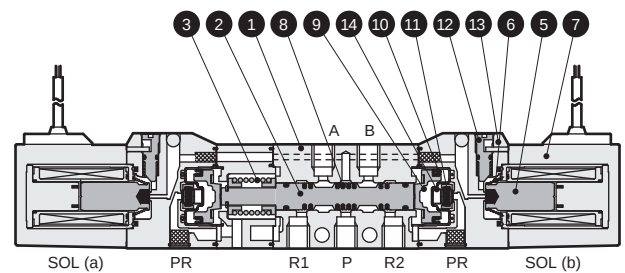
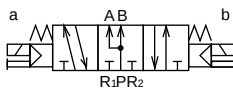
4KA140

● 3-position A/B/R connection



4KA150

● 3-position P/A/B connection



Main parts list

No.	Parts name	Material
1	Body	Aluminum alloy die-casting
2	Valving element (spool)	Aluminum
3	Valve spring	Stainless steel
4	Cap	Resin
5	Plunger	-
6	Plunger spring	-
7	Coil assembly	-
8	Spool packing seal	Nitrile rubber
9	Piston	Resin
10	Piston packing seal	Nitrile rubber
11	Valve seat	Nitrile rubber
12	Manual button	Resin
13	Pilot operated valve	Resin
14	Valve seat spring	Stainless steel

Repair parts list

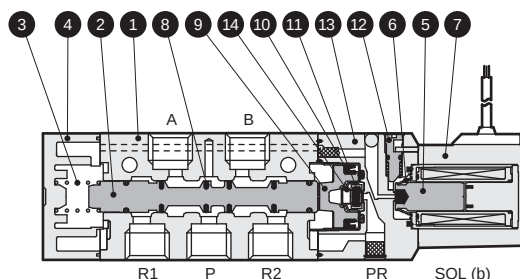
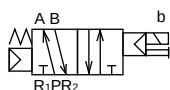
No. / parts name Model no.	2 8 Spool assembly	9 10 Piston assembly	5 6 7 Coil assembly *
3KA110 3KA1110	4K9-110	4K9-151	4K1L- E Electric connection option symbol Blank for grommet lead wire COIL- G Voltage
3KA120	4K9-118		
4KA110	4K9-110	4K9-151	
4KA120	4K9-118		
4KA130	4K9-111	4K9-152	
4KA140	4K9-112		
4KA150	4K9-113		

* Options satisfying the model selection are assembled or enclosed with the coil assembly compact terminal box and connector.

Internal structure and parts list

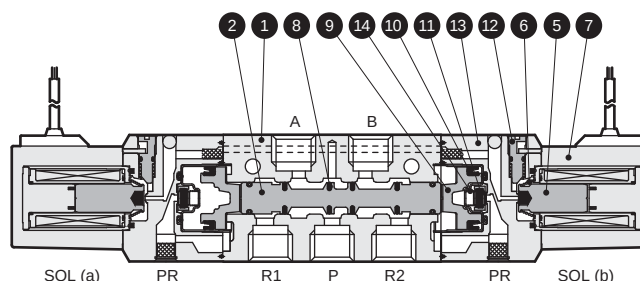
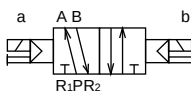
4KA210

● 2-position single solenoid



4KA220

● 2-position double solenoid



4KA230

● 3-position all ports closed



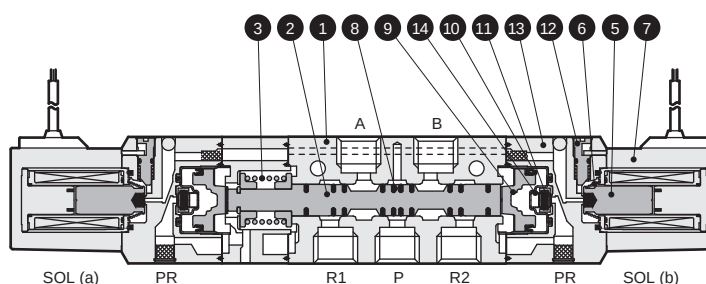
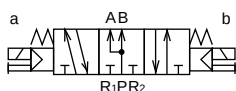
4KA240

● 3-position A/B/R connection



4KA250

● 3-position P/A/B connection



Main parts list

No.	Parts name	Material
1	Body	Aluminum alloy die-casting
2	Valving element (spool)	Aluminum
3	Valve spring	Stainless steel
4	Cap	Resin
5	Plunger	-
6	Plunger spring	-
7	Coil assembly	-
8	Spool packing seal	Nitrile rubber
9	Piston	Resin
10	Piston packing seal	Nitrile rubber
11	Valve seat	Nitrile rubber
12	Manual button	Resin
13	Pilot operated valve	Resin
14	Valve seat spring	Stainless steel

Repair parts list

No. / parts name	2 8	9 10	5 6 7
Model no.	Spool assembly	Piston assembly	Coil assembly *
4KA210	4K9-150	4K9-153	4K1L- Electric connection option symbol Blank for grommet COIL- Voltage lead wire
4KA220	4K9-126		
4KA230	4K9-127		
4KA240	4K9-128		
4KA250	4K9-129	4K9-154	

* Options satisfying the model selection are assembled or enclosed with the coil assembly compact terminal box and connector.

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

Discrete
3, 5 port pilot operated valve

4KA3 Series

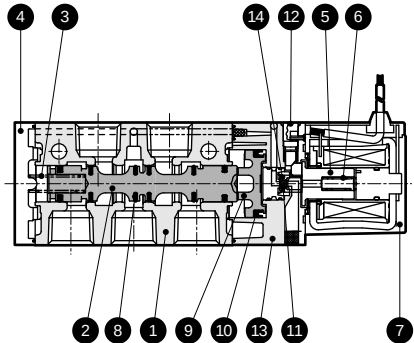
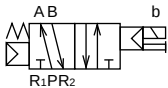
Discrete valve: Body porting

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/NA/
NVP
4F*0E
HMF
HSV
2QV
3QV
SKH
PCD/
FS/FD
Ending

Internal structure and parts list

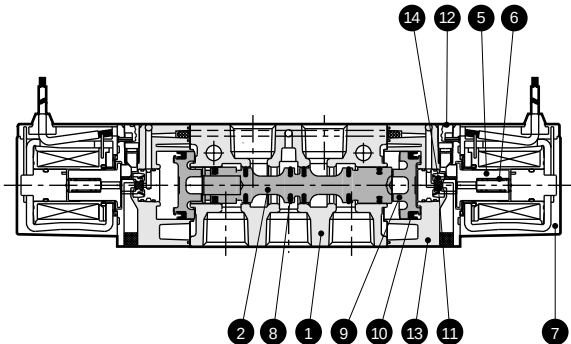
4KA310

● 2-position single solenoid



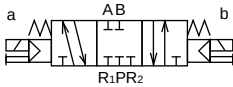
4KA320

● 2-position double solenoid



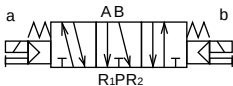
4KA330

● 3-position all ports closed



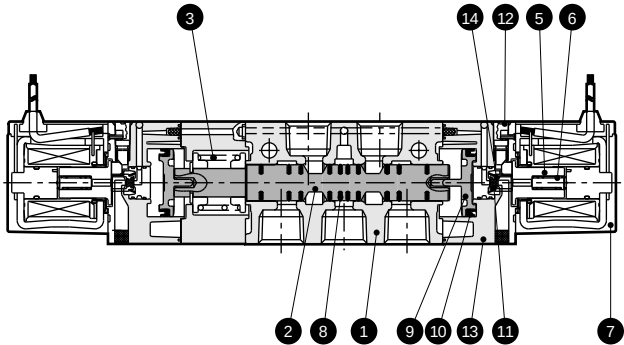
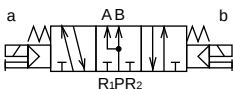
4KA340

● 3-position A/B/R connection



4KA350

● 3-position P/A/B connection



Main parts list

No.	Parts name	Material
1	Body	Aluminum alloy die-casting
2	Valving element (spool)	Aluminum
3	Valve spring	Stainless steel
4	Cap	Resin
5	Plunger	-
6	Plunger spring	-
7	Coil assembly	-
8	Spool packing seal	Nitrile rubber
9	Piston	Resin
10	Piston packing seal	Nitrile rubber
11	Valve seat	Nitrile rubber
12	Manual button	Resin
13	Pilot operated valve	Resin
14	Valve seat spring	Stainless steel

Repair parts list

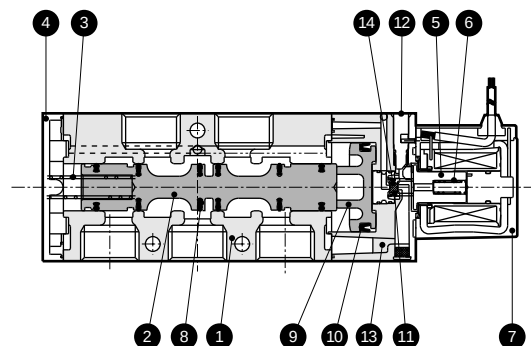
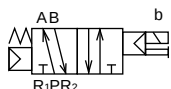
No. / parts name	2 8	9 10	5 6 7
Model no.	Spool assembly	Piston assembly	Coil assembly *
4KA310	4K9-133	4K9-137	4K3- E Electric connection option symbol Blank for grommet COIL- G Voltage lead wire
4KA320		4K9-138	
4KA330			
4KA340			
4KA350			

* Options satisfying the model selection are assembled or enclosed with the coil assembly compact terminal box and connector.

Internal structure and parts list

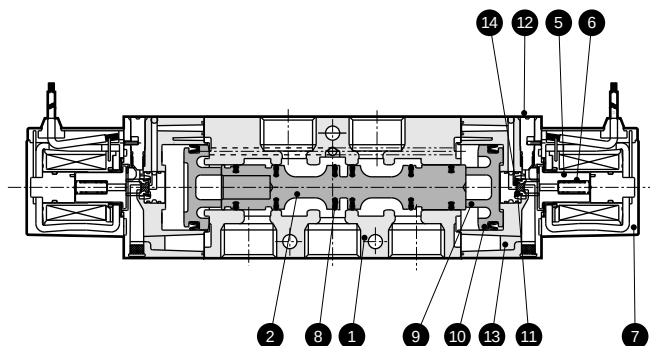
4KA410

● 2-position single solenoid



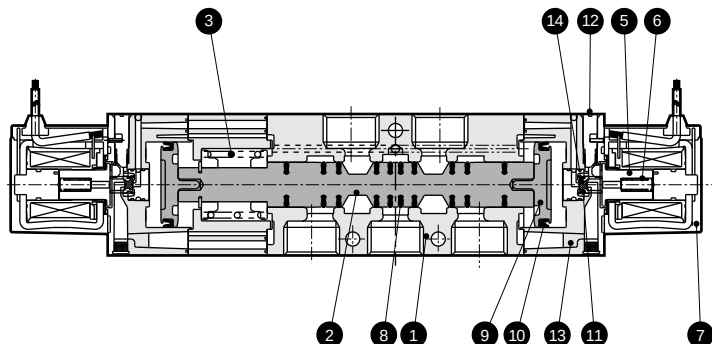
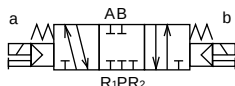
4KA420

● 2-position double solenoid



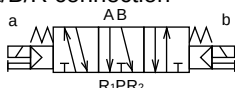
4KA430

● 3-position all ports closed



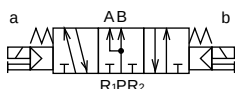
4KA440

● 3-position A/B/R connection



4KA450

● 3-position P/A/B connection



Main parts list

No.	Parts name	Material
1	Body	Aluminum alloy die-casting
2	Valving element (spool)	Aluminum
3	Valve spring	Stainless steel
4	Cap	Resin
5	Plunger	-
6	Plunger spring	-
7	Coil assembly	-
8	Spool packing seal	Nitrile rubber
9	Piston	Resin
10	Piston packing seal	Nitrile rubber
11	Valve seat	Nitrile rubber
12	Manual button	Resin
13	Pilot operated valve	Resin
14	Valve seat spring	Stainless steel

Repair parts list

No. / parts name	2 8	9 10	5 6 7
Model no.	Spool assembly	Piston assembly	Coil assembly *
4KA410	4K9-140	4K9-144	4K3- E Electric connection option symbol Blank for grommet COIL- G Voltage lead wire
4KA420		4K9-145	
4KA430			
4KA440			
4KA450			

* Options satisfying the model selection are assembled or enclosed with the coil assembly compact terminal box and connector.

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

Discrete
3, 5 port pilot operated valve