



Discrete valve body piping
Pilot operated 3, 5-port pneumatic valve

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

● Cylinder bore size: $\varnothing 20$ to $\varnothing 160$



Refer to the Ending for details.



- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB
- With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B**
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP
- NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

JIS symbol

- 3-port valve
2-position NC single
- 3-port valve
2-position NO single
- 3-port valve
2-position double
- 5-port valve
2-position single
- 5-port valve
2-position double
- 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
- 5-port valve
3-position P/A/B connection

Common specifications

| Item | Description |
|--|---|
| Valve and operation | Pilot operated soft spool valve |
| Working fluid | Compressed air |
| Max. working pressure MPa | 0.70 (≈ 100 psi, 7 bar) |
| Min. working pressure MPa | Refer to Individual specifications listed below |
| Proof pressure MPa | 1.05 (≈ 150 psi, 10.5 bar) |
| Ambient temperature $^{\circ}\text{C}$ | -5 (23°F) to 50 (122°F) (no freezing) |
| Fluid temperature $^{\circ}\text{C}$ | 5 (41°F) to 50 (122°F) |
| Lubrication | Not required |
| Degree of protection | Dust-proof |
| Vibration resistance m/s^2 | 50 or less |
| Shock resistance m/s^2 | 300 or less |
| Atmosphere | Cannot be used in corrosive gas environment. |

Electrical specifications

| Item | | 3KA1, 4KA1/2 | 4KA3/4 |
|-------------------------------------|----------------------|--------------------------|--------------------------|
| Rated voltage | AC | 100,200 (50 / 60 Hz) | |
| | DC | 24 | |
| Voltage fluctuation range | | $\pm 10\%$ | |
| Starting current | AC 100 V | 0.056/0.044 | 0.046/0.042 |
| | A AC 200 V | 0.028/0.022 | 0.023/0.021 |
| Holding current | AC 100 V | 0.028/0.022 | 0.023/0.021 |
| | A AC 200 V | 0.014/0.011 | |
| | DC 24 V | 0.075 | |
| Power consumption | AC 100 V | 1.8 / 1.4 (1.8 / 1.5) | 1.6 / 1.3 (1.8 / 1.5) |
| | W AC 200 V | 1.8 / 1.4 (1.8 / 1.5) | 1.6 / 1.3 (1.8 / 1.5) |
| | () : With indicator | DC 24 V | 1.8 (2.0) |
| Thermal class | | B (molded coil) | |
| Temperature rise $^{\circ}\text{C}$ | | 43 | 30 |

Reference: 100 VAC 50/60 Hz can be used with a rated voltage of 110 VAC 60 Hz and 200 VAC 50/60 Hz can be used with 220 VAC 60 Hz.

Individual specifications

1 MPa \approx 145.0 psi, 1 MPa = 10 bar

| Item | | | 3KA1 | 4KA1 | 4KA2 | 4KA3 | 4KA4 |
|-----------------------|------------|--------|---|---|---|--|---|
| Min. working pressure | 2-position | Single | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| | | Double | | | 0.10 | 0.10 | 0.10 |
| MPa | 3-position | | - | 0.20 | 0.20 | 0.20 | 0.20 |
| Port size | P/A/B port | | M5 Push-in fitting $\varnothing 4, \varnothing 6$ | M5 Push-in fitting $\varnothing 4, \varnothing 6$ | Rc1/8, G1/8, NPT1/8 Push-in fitting $\varnothing 6, \varnothing 8$ | Rc1/4, G1/4, NPT1/4 Push-in fitting $\varnothing 8, \varnothing 10$ | Rc3/8, G3/8, NPT3/8 Push-in fitting $\varnothing 10, \varnothing 12$ |
| | R1/R2 port | | M5 | M5 | Rc1/8, G1/8, NPT1/8 | Rc1/4, G1/4, NPT1/4 | Rc3/8, G3/8, NPT3/8 |

Performance/characteristics by model

| Item | | 3KA1 | 4KA1 | 4KA2 | 4KA3 | 4KA4 |
|---------------|---------------|------------|------------|------------|------------|------------|
| Response time | 2-position | 30 or less | 30 or less | 30 or less | 30 or less | 30 or less |
| *1 | ms 3-position | - | 60 or less | 60 or less | 60 or less | 60 or less |

*1: The response time is the value at 0.5 MPa working pressure, with no lubrication, and with the power ON. It depends on the pressure and the lubricant quality.

Weight

| Item | | | 3KA1 | 4KA1 | 4KA2 | 4KA3 | 4KA4 |
|--------|------------|-------------------|------|------|------|------|------|
| Weight | g | 2-position Single | 70 | 70 | 115 | 214 | 325 |
| | | Double | 110 | 110 | 155 | 315 | 435 |
| | 3-position | - | 120 | 170 | 354 | 505 | |

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 |

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

*2: Flow characteristics are values when the port size is M5 (3KA1, 4KA1), Rc1/8 (4KA2), Rc1/4 (4KA3), or Rc3/8 (4KA4).

Ozone-proof specifications (Ending Page 5)

** - Voltage - **P11**

Copper and PTFE free specifications

● Copper- and PTFE-based materials are not used in the flow path.

** - Voltage - **P6**

CE marking specifications

** - Voltage - **ST**

• Standard voltage of 24 VDC or less is CE marking-compatible even if the model No. is not indicated with "ST".

| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

3KA1/4KA1 to 4 Series

Discrete valve; body piping

How to order

4KA2 1 0 - 06 - M1 B - AC100V

● Single solenoid valve for manifold

4KA2 1 9 - 06 - M1 B - AC100V

A Model No. **B** Solenoid position

C Port size

D Manual override

E Electrical connections
* Refer to page 1263 for the circuit diagram with surge suppressor/lamp.

F Other options

G Voltage

[Table 1] Compact terminal box L/LS compatibility table

| Code | Description | | 3KA1 | 4KA1 | 4KA2 | 4KA3 | 4KA4 | Surge suppressor |
|------|--------------------------------------|--------------------------------------|------|------|------|------|------|------------------|
| L | Without lead wire | With indicator lamp | AC | ● | ● | ● | ● | ● |
| | | DC | | | | ● | ● | |
| | with surge suppressor/indicator lamp | AC | | | | | | |
| | | DC | ● | ● | ● | | | Integrated |
| LS | Without lead wire | with surge suppressor/indicator lamp | AC | ● | ● | ● | ● | Integrated |
| | | DC | | | | ● | ● | Integrated |

⚠ Precautions for model No. selection

*1 : The compact terminal boxes of 3KA1, 4KA1, and 4KA2 and the DC voltage models of L, and LS are equipped with a surge suppressor.

*2 : The surge suppressor for attachment is a suppression connector when the grommet lead wire is 24 VDC or less. (Refer to page 1262)

*3 : The surge suppressor can only be selected when the grommet lead wire or compact terminal box "B" has been selected for the electrical connections.

*4 : With regard to the printed model No., although the model No. when placing an order is "4KA□□9", the model No. listed on the product name plate will be "4KA□□0".

[Example of model No.]

4KA210-06-M1BP-AC100V

- A** Model : 4KA2
- B** Solenoid position : 2-position single
- C** Port size : Rc1/8
- D** Manual override : Locking manual override
- E** Electrical connections: Compact terminal box/without lead wire
- F** Other options : With mounting plate
- G** Voltage : 100 VAC 50/60 Hz

* Gasket/mounting screw attached (*4)

| | | A Model No. | | | | |
|--------------------------------------|--|---|---|------|----------|------|
| | | 3KA1 | 4KA1 | 4KA2 | 4KA3 | 4KA4 |
| Solenoid position B | Code | Description | | | | |
| | 1 | 2-position single | | ● | ● | ● |
| | 2 | 2-position double | ● | ● | ● | ● |
| | 3 | 3-position all ports closed | | ● | ● | ● |
| | 4 | 3-position A/B/R connection | | ● | ● | ● |
| Port size C | 5 | 3-position P/A/B connection | | ● | ● | ● |
| | 1 | 2-position single normally closed | ● | | | |
| | 11 | 2-position single 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) |
| | 10 | Rc3/8 | | | | (4) |
| | GS4 | ø4 Push-in fitting | (1) | (1) | | |
| | GS6 | ø6 Push-in fitting | (1) | (1) | (2) | |
| GS8 | ø8 Push-in fitting | | | (2) | (3) | |
| GS10 | ø10 Push-in fitting | | | | (3) (4) | |
| GS12 | ø12 Push-in fitting | | | | (4) | |
| Port | P/A/B port | R1/R2 port | | | | |
| | | (1) = M5 (5) = NPT1/8 (6) = NPT1/4 (7) = NPT3/8 | | | | |
| 06N | NPT1/8 | | | (5) | | |
| 08N | NPT1/4 | | | | (6) | |
| 10N | NPT3/8 | | | | (7) | |
| GS4N | ø4 Push-in fitting | (1) | (1) | | | |
| GS6N | ø6 Push-in fitting | (1) | (1) | (5) | | |
| GS8N | ø8 Push-in fitting | | | (5) | (6) | |
| GS10N | ø10 Push-in fitting | | | | (6) (7) | |
| GS12N | ø12 Push-in fitting | | | | (7) | |
| Port | P/A/B port | R1/R2 port | | | | |
| | | (1) = M5 (8) = G1/8 (9) = G1/4 (10) = G3/8 | | | | |
| 06G | G1/8 | | | (8) | | |
| 08G | G1/4 | | | | (9) | |
| 10G | G3/8 | | | | (10) | |
| GS4G | ø4 Push-in fitting | (1) | (1) | | | |
| GS6G | ø6 Push-in fitting | (1) | (1) | (8) | | |
| GS8G | ø8 Push-in fitting | | | (8) | (9) | |
| GS10G | ø10 Push-in fitting | | | | (9) (10) | |
| GS12G | ø12 Push-in fitting | | | | (10) | |
| D | Blank | Non-locking manual override | ● | ● | ● | ● |
| | M1 | Locking manual override | ● | ● | ● | ● |
| E | Refer to the electrical connections list on the next page. | | | | | |
| F | Blank | No option | ● | ● | ● | ● |
| | P | Mounting plate (compatible only with 2-position single) | ● | ● | ● | ● |
| | S | Surge suppressor attached (*2) (*3) | ● | ● | ● | ● |
| | -A | Coolant supported (packing: FKM) | ● | ● | ● | ● |
| G | Standard | AC100V | 100 VAC 50/60 Hz | ● | ● | ● |
| | | AC200V | 200 VAC 50/60 Hz | ● | ● | ● |
| | | DC24V | 24 VDC | ● | ● | ● |
| | Option | DC12V | 12 VDC | ● | ● | ● |
| | | AC110V | 110 VAC 50/60 Hz | ● | ● | ● |
| | | AC220V | 220 VAC 50/60 Hz | ● | ● | ● |
| * Other custom order products | | | | | | |
| | AC24V | | ● | ● | ● | ● |
| | AC115V | | ● | ● | ● | ● |
| | AC120V | | ● | ● | ● | ● |

[Electrical connections list]

| | | A Model No. | | | | |
|------|---|---|--|------|------|------|
| | | 3KA1 | 4KA1 | 4KA2 | 4KA3 | 4KA4 |
| Code | Description | | | | | |
| E | Grommet lead wire | | | | | |
| | Blank | Grommet lead wire (300 mm) | ● | ● | ● | ● |
| | Compact terminal box | | | | | |
| | B | Without lead wire | ● | ● | ● | ● |
| | L | Without lead wire | Refer to [Table 1] on the previous page for details (*1) | | | |
| | LS | Without lead wire, with surge suppressor/lamp | Refer to [Table 1] on the previous page for details (*1) | | | |
| | C-connector (lead wire lateral direction) | | | | | |
| | 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 | Without lead wire | ● | ● | ● | ● |
| | C2 | Lead wire length (300 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | C20 | Lead wire length (500 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | C21 | Lead wire length (1000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | C22 | Lead wire length (2000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | C23 | Lead wire length (3000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | C3 | Without lead wire, with surge suppressor/lamp | ● | ● | ● | ● |
| | D-connector (lead wire upward direction) | | | | | |
| | 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 | Without lead wire | ● | ● | ● | ● |
| | D2 | Lead wire length (300 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | D20 | Lead wire length (500 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | D21 | Lead wire length (1000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | D22 | Lead wire length (2000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | D23 | Lead wire length (3000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | D3 | Without lead wire, with surge suppressor/lamp | ● | ● | ● | ● |

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E MN4E
- W4GA/B2
- W4GB4
- MN3S0 MN4S0
- 4SA/B0
- 4KA/B**
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G GMF
- PV5 GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV HSV
- 2QV 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

3KA1/4KA1 Series

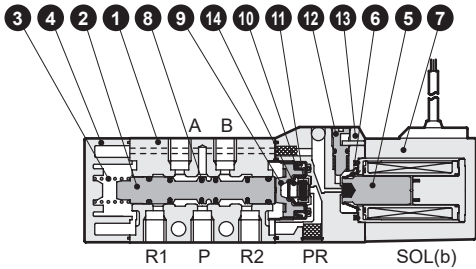
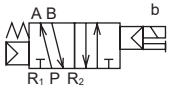
Discrete valve; body piping

Internal structure and parts list

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB
- With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B**
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP
- NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

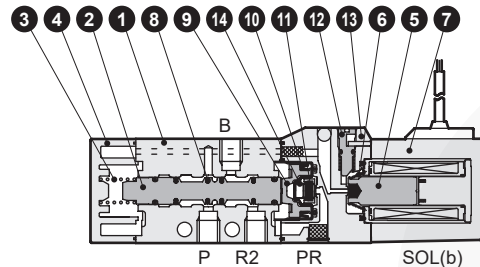
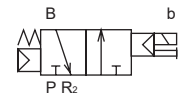
4KA110

● 2-position single



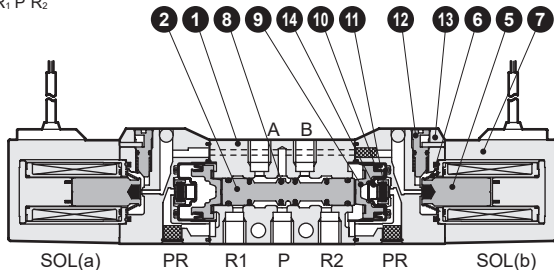
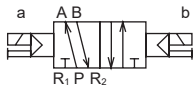
3KA110-NC

● 2-position single / NC



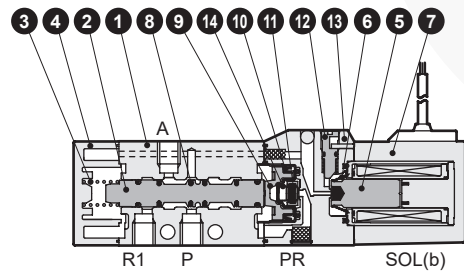
4KA120

● 2-position double



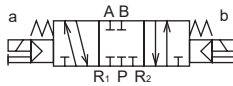
3KA1110-NO

● 2-position single / NO



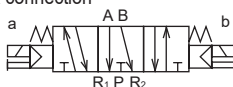
4KA130

● 3-position all ports closed



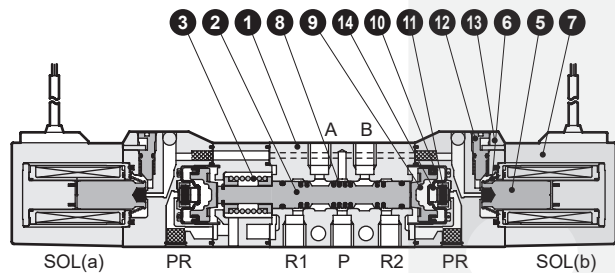
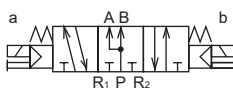
4KA140

● 3-position A/B/R connection



4KA150

● 3-position P/A/B connection



Main parts list

| No. | Part 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 | Nitrile rubber |
| 9 | Piston | Resin |
| 10 | Piston packing | Nitrile rubber |
| 11 | Valve seat | Nitrile rubber |
| 12 | Manual button | Resin |
| 13 | Pilot valve | Resin |
| 14 | Valve seat spring | Stainless steel |

Repair parts list

| No./part name | 2 8 | 9 10 | 5 6 7 |
|---------------|----------------|-----------------|-----------------|
| Model No. | Spool assembly | Piston assembly | Coil assembly * |
| 3KA110 | 4K9-110 | 4K9-151 | 4K9-151 |
| 3KA1110 | | | |
| 3KA120 | 4K9-118 | 4K9-151 | 4K9-151 |
| 4KA110 | | | |
| 4KA120 | 4K9-118 | 4K9-152 | 4K9-152 |
| 4KA130 | | | |
| 4KA140 | 4K9-112 | 4K9-152 | 4K9-152 |
| 4KA150 | | | |
| 4KA150 | 4K9-113 | | |

* The compact terminal box and connector of the coil assembly will come assembled and included with the options of the descriptions indicated with model No. selection.

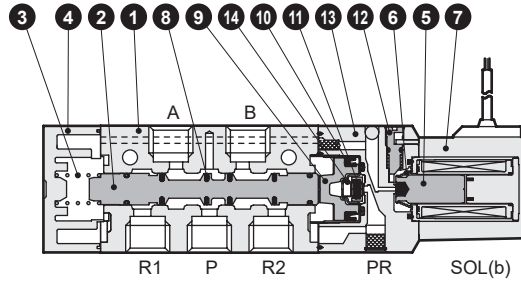
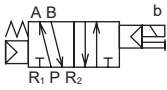
4K1L-**E** electrical connection option code-
Blank for grommet
lead wire

COIL - **G** Voltage

Internal structure and parts list

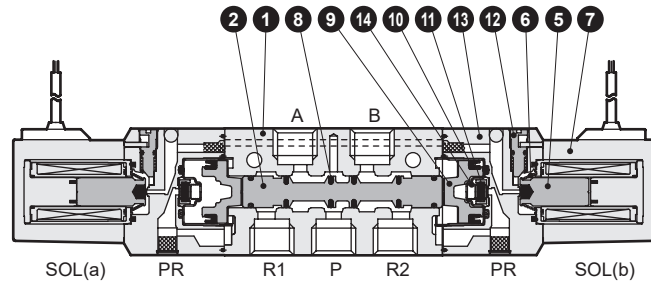
4KA210

- 2-position single



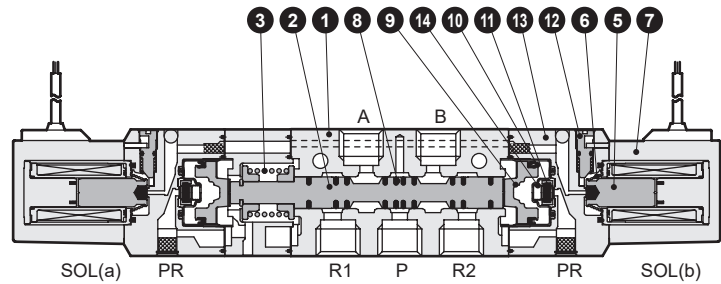
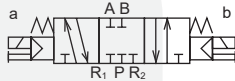
4KA220

- 2-position double



4KA230

- 3-position all ports closed



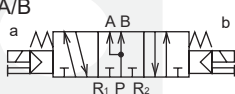
4KA240

- 3-position A/B/R connection



4KA250

- 3-position P/A/B connection



Main parts list

| No. | Part 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 | Nitrile rubber |
| 9 | Piston | Resin |
| 10 | Piston packing | Nitrile rubber |
| 11 | Valve seat | Nitrile rubber |
| 12 | Manual button | Resin |
| 13 | Pilot valve | Resin |
| 14 | Valve seat spring | Stainless steel |

Repair parts list

| No./part name | 2 8 | 9 10 | 5 6 7 |
|---------------|----------------|-----------------|---|
| Model No. | Spool assembly | Piston assembly | Coil assembly * |
| 4KA210 | 4K9-150 | 4K9-153 | 4K1L E electrical connection option code Blank for grommet lead wire COIL - G Voltage |
| 4KA220 | 4K9-126 | | |
| 4KA230 | 4K9-127 | | |
| 4KA250 | 4K9-129 | | |

* The compact terminal box and connector of the coil assembly will come assembled and included with the options of the descriptions indicated with model No. selection.

| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

4KA3 Series

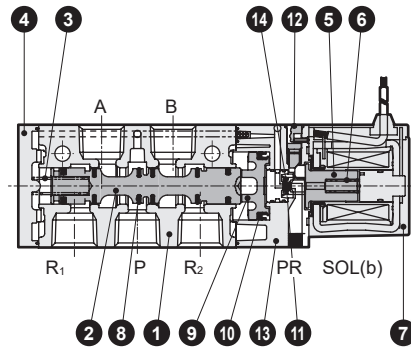
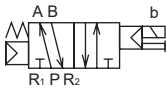
Discrete valve; body piping

Internal structure and parts list

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E MN4E
- W4GA/B2
- W4GB4
- MN3S0 MN4S0
- 4SA/B0
- 4KA/B**
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G GMF
- PV5 GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV HSV
- 2QV 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

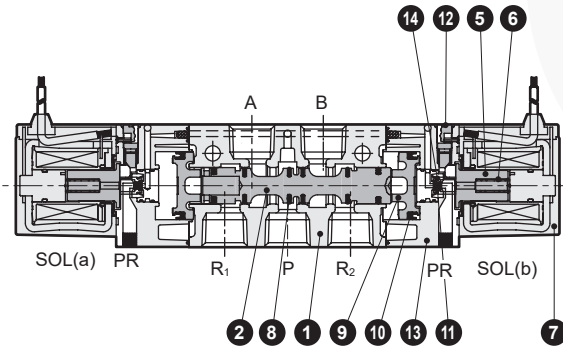
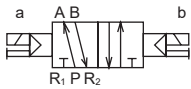
4KA310

● 2-position single



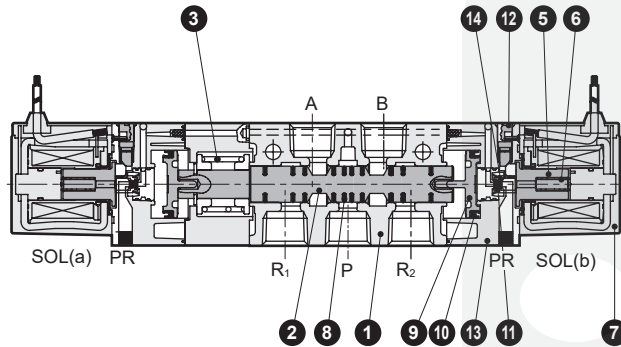
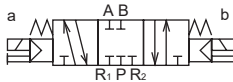
4KA320

● 2-position double



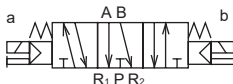
4KA330

● 3-position all ports closed



4KA340

● 3-position A/B/R connection



4KA350

● 3-position P/A/B connection



Main parts list

Repair parts list

| No. | Part name | Material | No./part name Model No. | 2 8 | | 9 10 | | 5 6 7 | | |
|-----|-------------------------|----------------------------|----------------------------|----------------|--|-----------------|--|-----------------|--|--|
| | | | | Spool assembly | | Piston assembly | | Coil assembly * | | |
| 1 | Body | Aluminum alloy die-casting | 4KA310 | | | | | | | |
| 2 | Valving element (spool) | Aluminum | 4KA320 | 4K9-133 | | | | | | |
| 3 | Valve spring | Stainless steel | 4KA330 | 4K9-134 | | | | | | |
| 4 | Cap | Resin | 4KA340 | 4K9-135 | | | | | | |
| 5 | Plunger | - | 4KA350 | 4K9-136 | | | | | | |
| 6 | Plunger spring | - | | | | | | | | |
| 7 | Coil assembly | - | | | | | | | | |
| 8 | Spool packing | Nitrile rubber | | | | | | | | |
| 9 | Piston | Resin | | | | | | | | |
| 10 | Piston packing | Nitrile rubber | | | | | | | | |
| 11 | Valve seat | Nitrile rubber | | | | | | | | |
| 12 | Manual button | Resin | | | | | | | | |
| 13 | Pilot valve | Resin | | | | | | | | |
| 14 | Valve seat spring | Stainless steel | | | | | | | | |

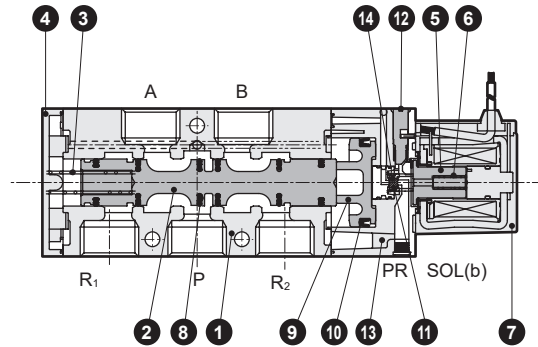
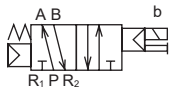
* The terminal box and connector of the coil assembly will come assembled and included with the options of the descriptions indicated with model No. selection.

4K3-**E** electrical connection option code
Blank for grommet lead wire
COIL - **G** Voltage

Internal structure and parts list

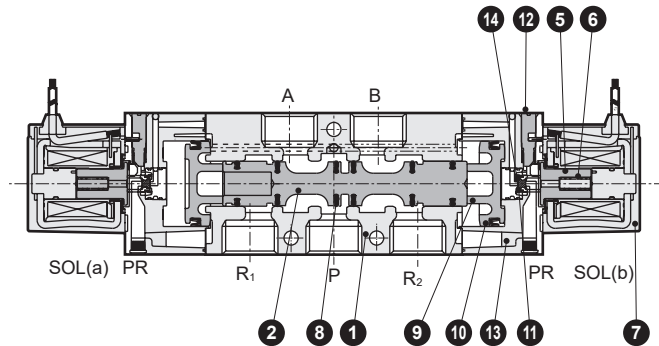
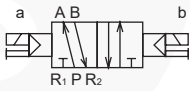
4KA410

- 2-position single



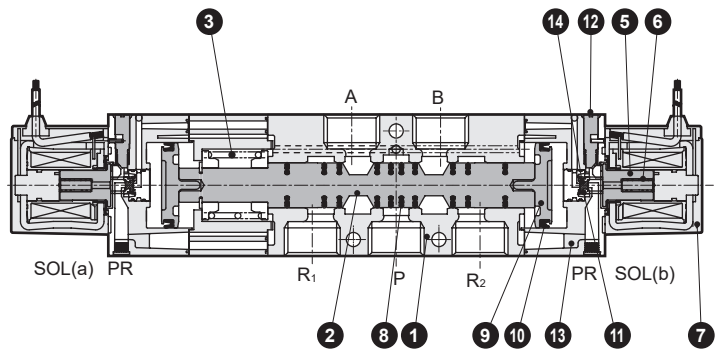
4KA420

- 2-position double



4KA430

- 3-position all ports closed



4KA440

- 3-position A/B/R connection



4KA450

- 3-position P/A/B connection



Main parts list

| No. | Part 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 | Nitrile rubber |
| 9 | Piston | Resin |
| 10 | Piston packing | Nitrile rubber |
| 11 | Valve seat | Nitrile rubber |
| 12 | Manual button | Resin |
| 13 | Pilot valve | Resin |
| 14 | Valve seat spring | Stainless steel |

Repair parts list

| No./part name | 2 8 | 9 10 | 5 6 7 |
|---------------|----------------|-----------------|---|
| Model No. | Spool assembly | Piston assembly | Coil assembly * |
| 4KA410 | 4K9-140 | 4K9-144 | 4K3- E electrical connection option code Blank for grommet lead wire COIL - G Voltage |
| 4KA420 | 4K9-141 | 4K9-145 | |
| 4KA430 | 4K9-142 | | |
| 4KA440 | 4K9-143 | | |

* The terminal box and connector of the coil assembly will come assembled and included with the options of the descriptions indicated with model No. selection.

| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

3KA1 Series

Discrete valve; body piping

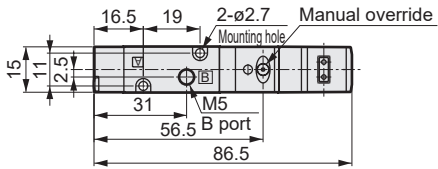
Dimensions

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E MN4E
- W4GA/B2
- W4GB4
- MN3S0 MN4S0
- 4SA/B0
- 4KA/B**
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G GMF
- PV5 GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV HSV
- 2QV 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

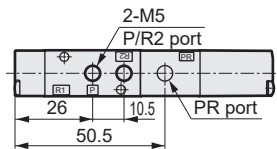
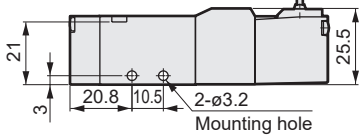
3KA110



● 2 position NC single: grommet lead wire



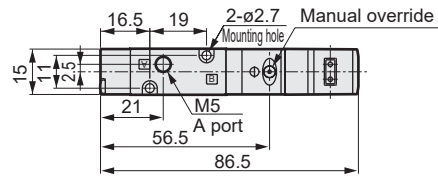
Lead wire length 300 mm (AWG#22, O.D. ø1.6)



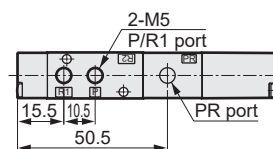
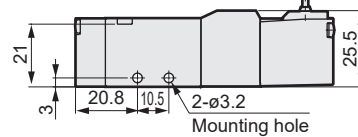
3KA1110



● 2 position NO single: grommet lead wire



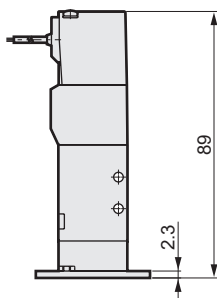
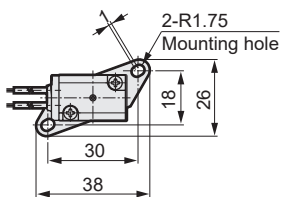
Lead wire length 300 mm (AWG#22, O.D. ø1.6)



● Mounting plate: (P [2-position single only])

Material: Steel

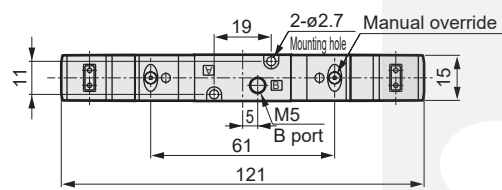
Zinc chromate treatment



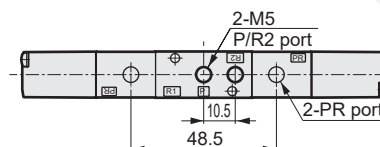
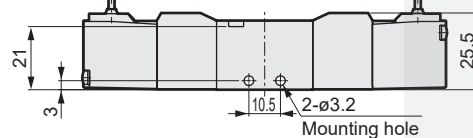
3KA120



● 2 position NC double: grommet lead wire

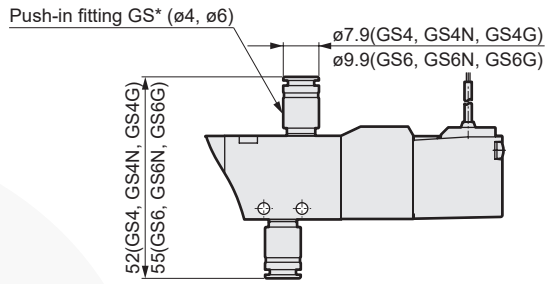


Lead wire length 300 mm (AWG#22, O.D. ø1.6)



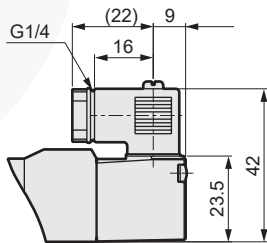
Dimensions

- $\varnothing 4/\varnothing 6$ push-in fitting: (GS4*/GS6*)

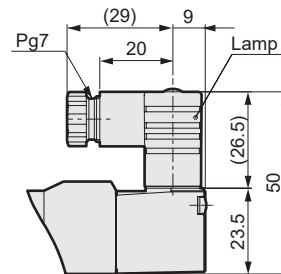


- Compact terminal box: (B [Without lamp]/L/LS [With lamp])

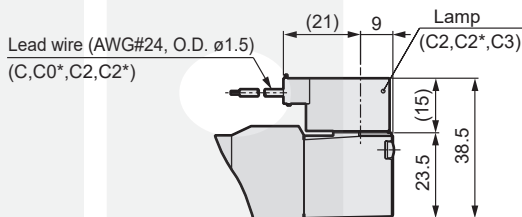
Without indicator lamp



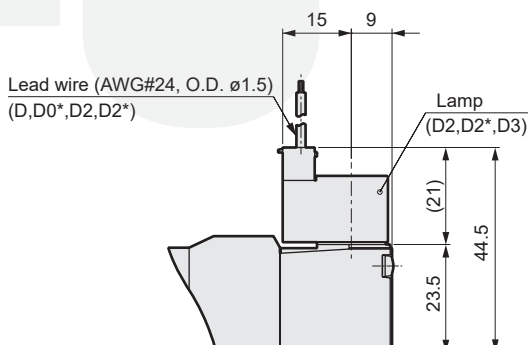
With indicator lamp



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



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



| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

4KA1 Series

Discrete valve; body piping

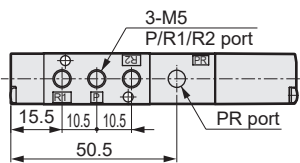
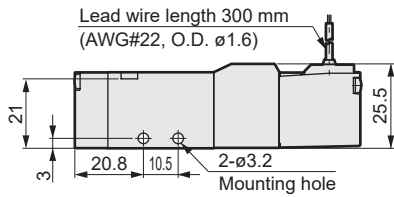
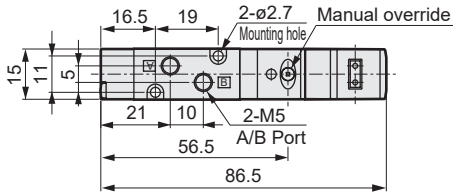
Dimensions

| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5-S0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

4KA110



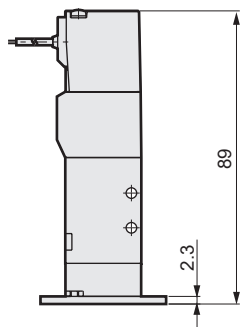
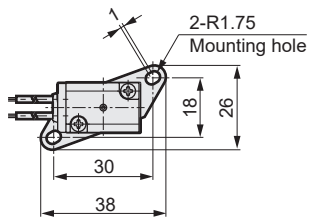
● 2-position single: grommet lead wire



● Mounting plate: (P [2-position single only])

Material: Steel

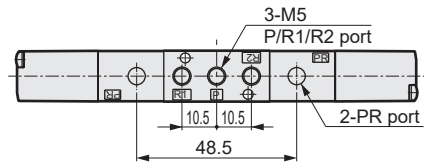
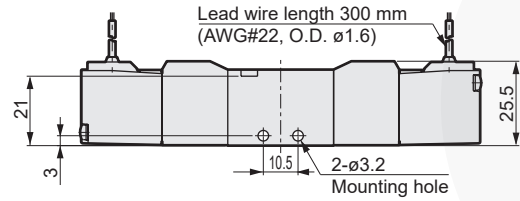
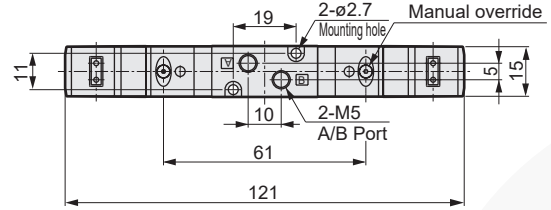
Zinc chromate treatment



4KA120



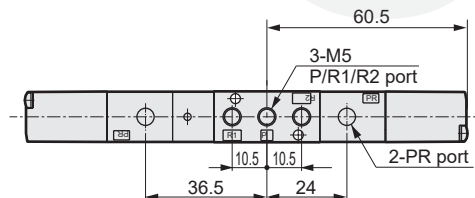
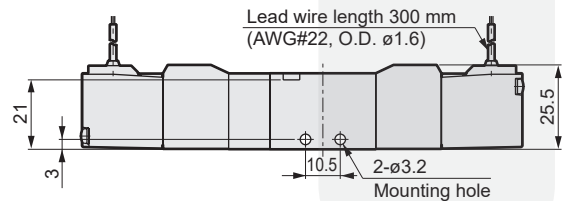
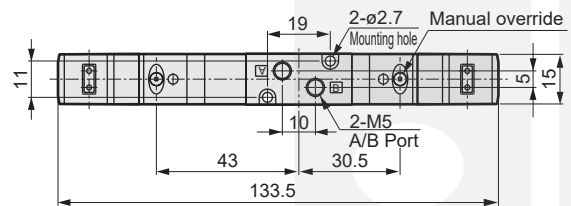
● 2-position double: grommet lead wire



4KA140

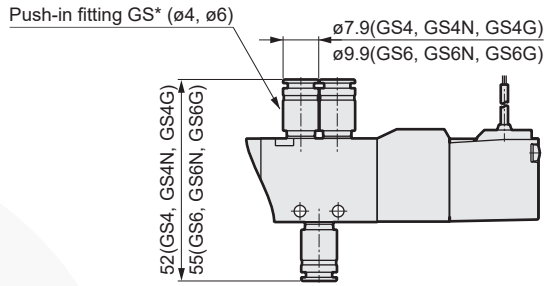


● 3-position: grommet lead wire



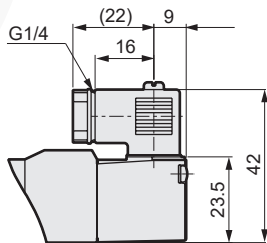
Dimensions

- $\varnothing 4/\varnothing 6$ push-in fitting: (GS4*/GS6*)

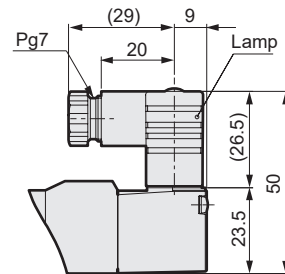


- Compact terminal box: (B [Without lamp]/L/LS [With lamp])

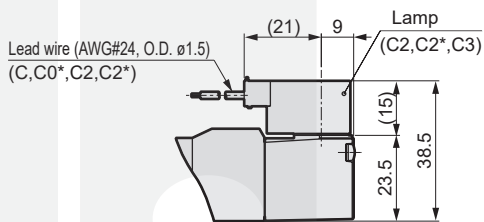
Without indicator lamp



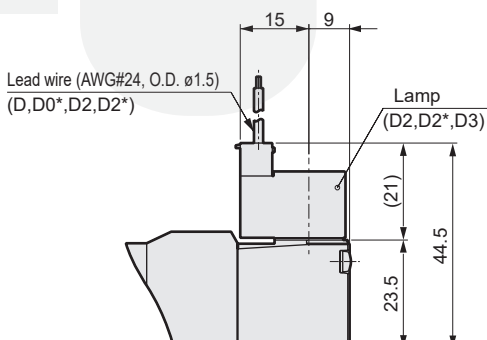
With indicator lamp



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



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



| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

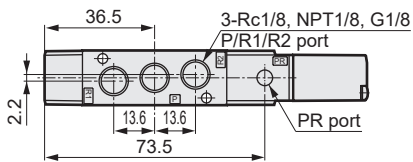
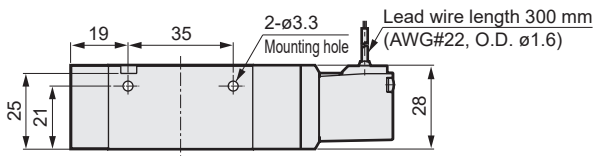
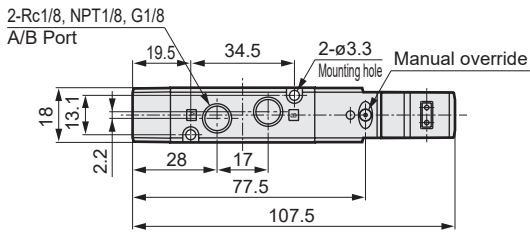
4KA2 Series

Discrete valve; body piping

Dimensions

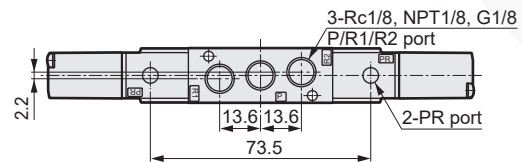
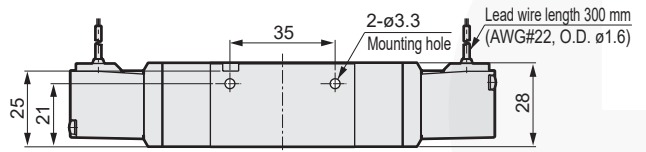
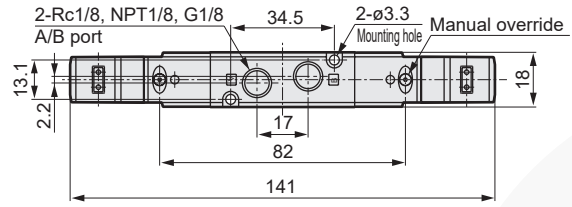
4KA210

● 2-position single: grommet lead wire



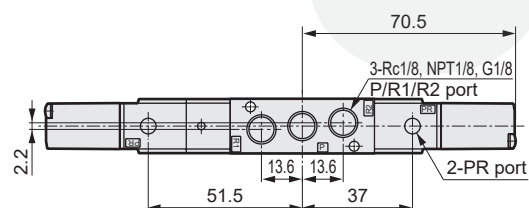
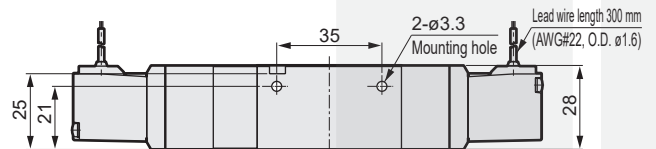
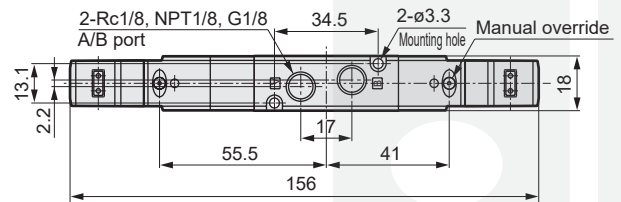
4KA220

● 2-position double: grommet lead wire



4KA240

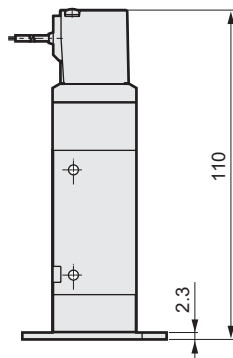
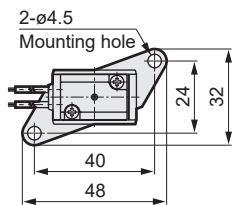
● 3-position: grommet lead wire



● Mounting plate: (P [2-position single only])

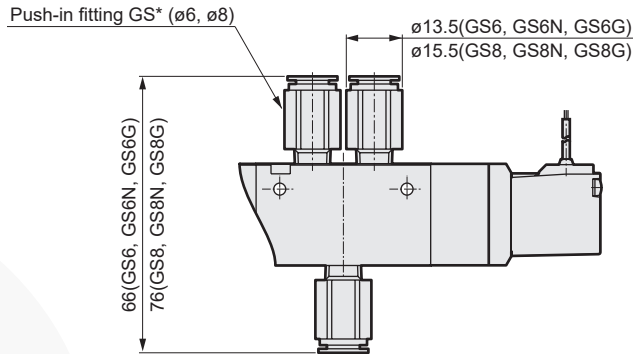
Material: Steel

Zinc chromate treatment



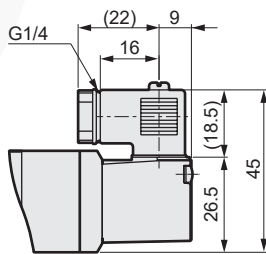
Dimensions

- $\varnothing 6/\varnothing 8$ push-in fitting: (GS6*/GS8*)

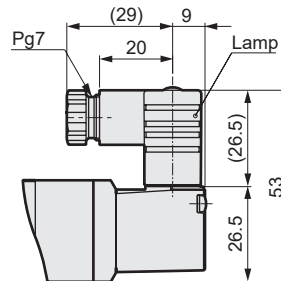


- Compact terminal box: (B [Without lamp]/L/LS [With lamp])

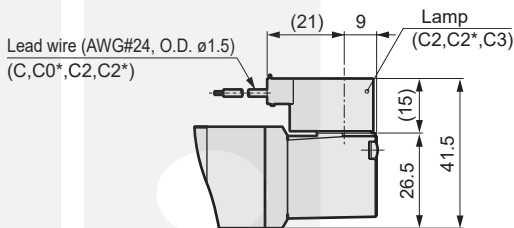
Without indicator lamp



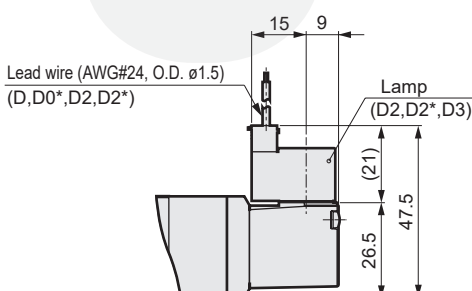
With indicator lamp



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



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



| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

4KA3 Series

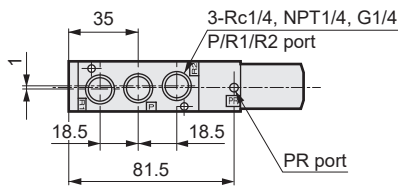
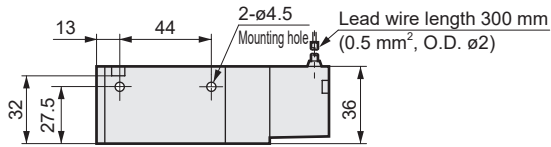
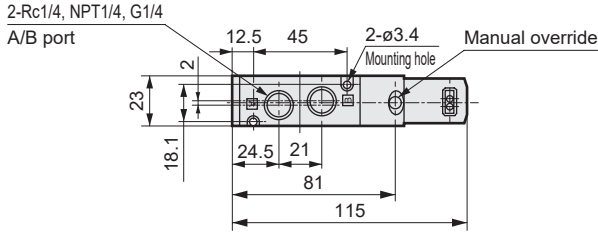
Discrete valve; body piping

Dimensions

4KA310



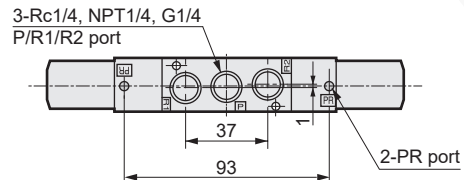
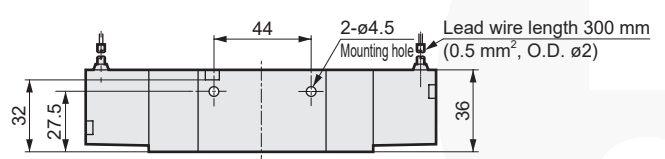
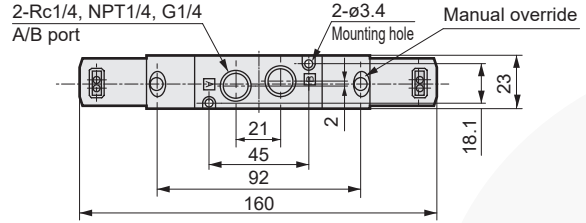
● 2-position single: grommet lead wire



4KA320



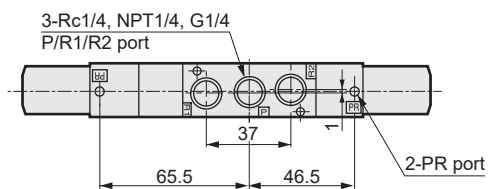
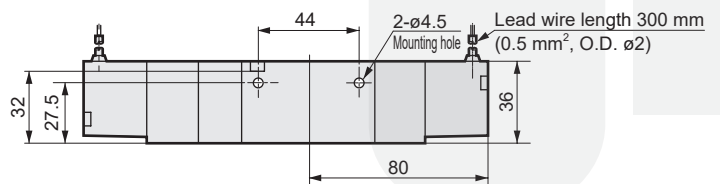
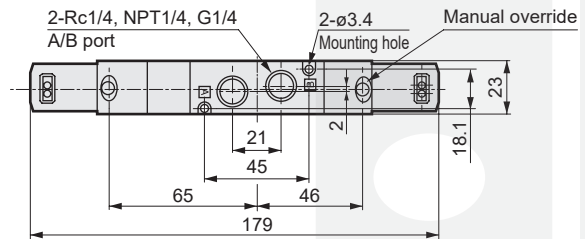
● 2-position double: grommet lead wire



4KA340



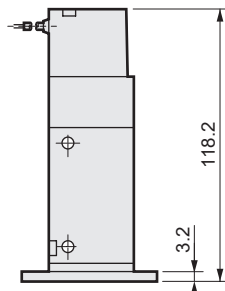
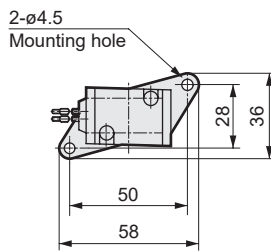
● 3-position: grommet lead wire



● Mounting plate: (P [2-position single only])

Material: Steel

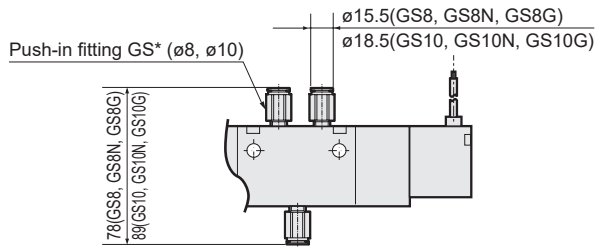
Zinc chromate treatment



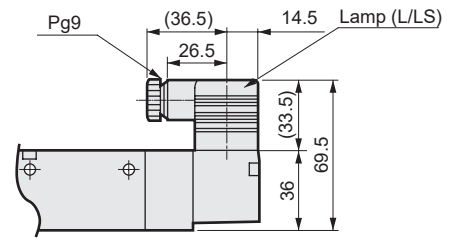
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B**
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP
- NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

Dimensions

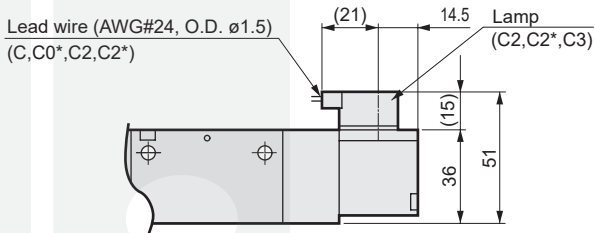
● $\varnothing 8/\varnothing 10$ push-in fitting: (GS8*/GS10*)



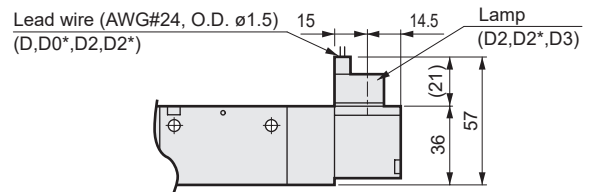
● Terminal box: (B/L/LS)



● C-connector: (C/C1/C0*/C2/C2*/C3)



● D-connector: (D/D1/D0*/D2/D2*/D3)



| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

4KA4 Series

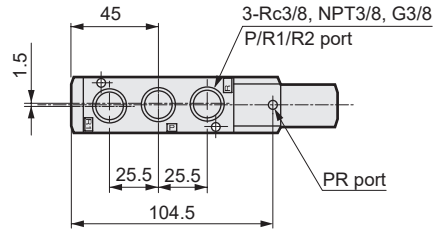
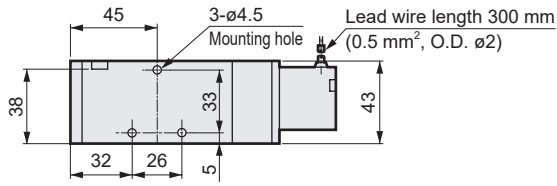
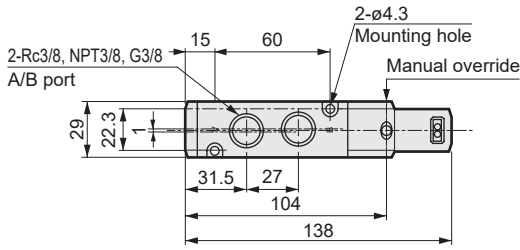
Discrete valve; body piping

Dimensions

4KA410



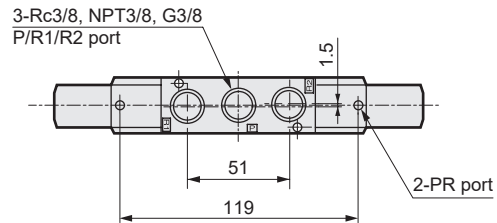
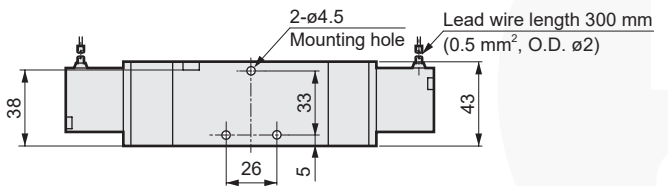
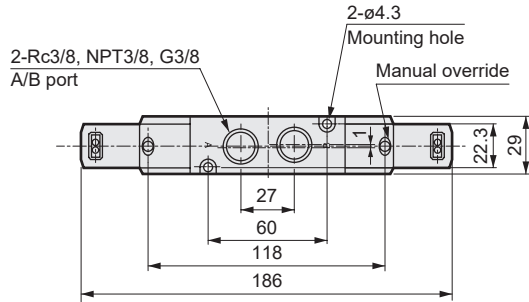
● 2-position single: grommet lead wire



4KA420



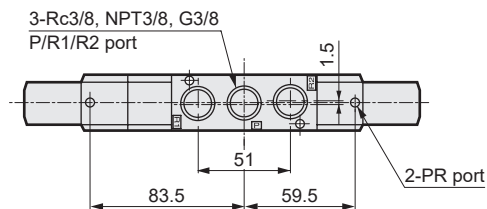
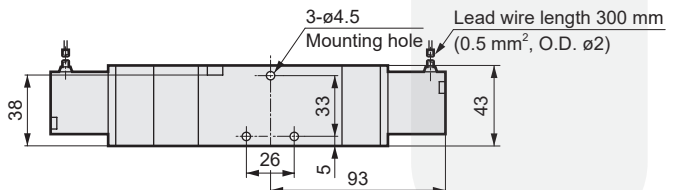
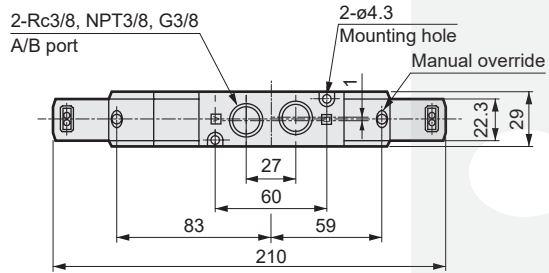
● 2-position double: grommet lead wire



4KA440³



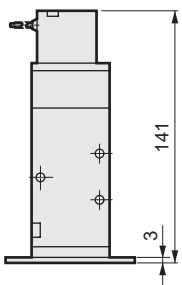
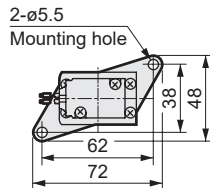
● 3-position: grommet lead wire



● Mounting plate: (P [2-position single only])

Material: Steel

Zinc chromate treatment

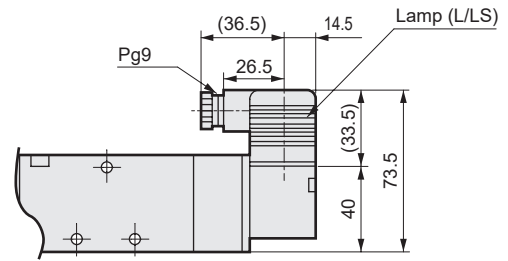
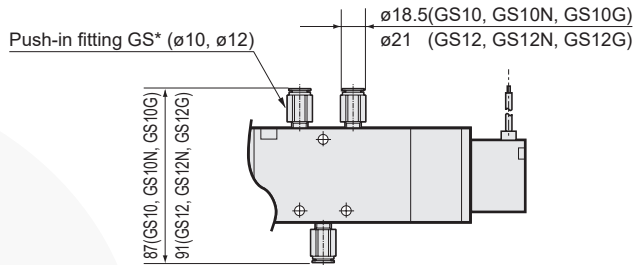


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B**
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP
- NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

Dimensions

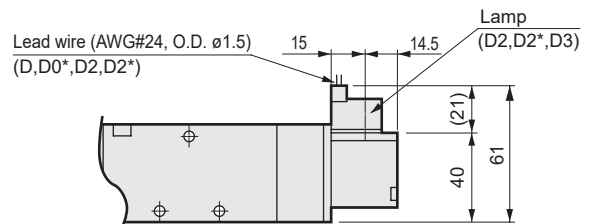
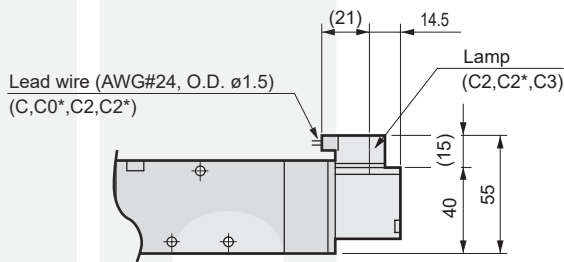
● With $\phi 10/\phi 12$ push-in fitting: (GS10*/GS12*)

● Terminal box: (B/L/LS)



● C-connector: (C/C1/C0*/C2/C2*/C3)

● D-connector: (D/D1/D0*/D2/D2*/D3)



| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G GMF |
| PV5 GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV HSV |
| 2QV 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

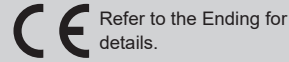
4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HNV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



Discrete valve sub-plate piping
Pilot operated 5-port pneumatic valve

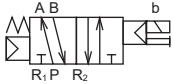
4KB1/2/3/4 Series

● Cylinder bore size: $\varnothing 20$ to $\varnothing 160$

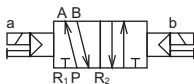


JIS symbol

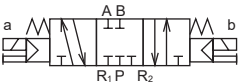
- 5-port valve
2-position single



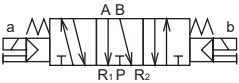
- 5-port valve
2-position double



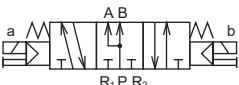
- 5-port valve
3-position all ports closed



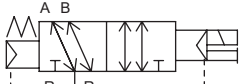
- 5-port valve
3-position A/B/R connection



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



- External pilot



(2-position single)

Common specifications

| Item | Description |
|--|---|
| Valve and operation | Pilot operated soft spool valve |
| Working fluid | Compressed air |
| Max. working press. MPa | 0.70 (≈ 100 psi, 7 bar) |
| Min. working press. MPa | Refer to Individual specifications listed below |
| Proof pressure MPa | 1.05 (≈ 150 psi, 10.5 bar) |
| Ambient temperature $^{\circ}\text{C}$ | -5 (23 $^{\circ}\text{F}$) to 50 (122 $^{\circ}\text{F}$) (no freezing) |
| Fluid temperature $^{\circ}\text{C}$ | 5 (41 $^{\circ}\text{F}$) to 50 (122 $^{\circ}\text{F}$) |
| Lubrication | Not required |
| Degree of protection | Dust-proof |
| Vibration resistance m/s^2 | 50 or less |
| Shock resistance m/s^2 | 300 or less |
| Atmosphere | Cannot be used in corrosive gas environment. |

*1: The working pressure when the external pilot (option code: K) has been selected is 0 to 0.7 MPa.
In addition, use the pilot with a pressure of 0.2 to 0.7 MPa.

Electrical specifications

| Item | | 4KB1/2 | 4KB3/4 |
|-------------------------------------|------------|--------------------------|--------------------------|
| Rated voltage | AC | 100,200 (50 / 60 Hz) | |
| | DC | 24 | |
| Voltage fluctuation range | | $\pm 10\%$ | |
| Starting current | AC 100 V | 0.056/0.044 | 0.046/0.042 |
| | A AC 200 V | 0.028/0.022 | 0.023/0.021 |
| Holding current | AC 100 V | 0.028/0.022 | 0.023/0.021 |
| | A AC 200 V | 0.014/0.011 | |
| Power consumption | DC 24 V | 0.075 | |
| | AC 100 V | 1.8 / 1.4 (1.8 / 1.5) | 1.6 / 1.3 (1.8 / 1.5) |
| () : With indicator | 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) | |
| Thermal class | | B (molded coil) | |
| Temperature rise $^{\circ}\text{C}$ | | 43 | 30 |

Reference: 100 VAC 50/60 Hz can be used with a rated voltage of 110 VAC 60 Hz and 200 VAC 50/60 Hz can be used with 220 VAC 60 Hz.

Individual specifications

1 MPa \approx 145.0 psi, 1 MPa = 10 bar

| Item | | | 4KB1 | 4KB2 | 4KB3 | 4KB4 |
|-----------------------|------------|------------|----------------|----------------|----------------|--------------|
| Min. working pressure | 2-position | Single | 0.15 | 0.15 | 0.15 | 0.15 |
| | | Double | | 0.10 | 0.10 | 0.10 |
| | 3-position | 0.20 | 0.20 | 0.20 | 0.20 | |
| Port size | P/A/B port | Rc1/8 | Rc1/8 | Rc1/8, Rc1/4 | Rc1/4, Rc3/8 | Rc3/8, Rc1/2 |
| | | NPT1/8 | NPT1/8, NPT1/4 | NPT1/4, NPT3/8 | NPT3/8, NPT1/2 | |
| | G1/8 | G1/8, G1/4 | G1/4, G3/8 | G3/8, G1/2 | | |
| | R1/R2 port | Rc1/8 | Rc1/8, Rc1/4 | Rc1/4, Rc3/8 | Rc3/8, Rc1/2 | |
| | | NPT1/8 | NPT1/8, NPT1/4 | NPT1/4, NPT3/8 | NPT3/8, NPT1/2 | |
| | | G1/8 | G1/8, G1/4 | G1/4, G3/8 | G3/8, G1/2 | |

Performance/characteristics by model

| Item | | 4KB1 | 4KB2 | 4KB3 | 4KB4 |
|---------------|------------------|------------|------------|------------|------------|
| Response time | 2-position | 30 or less | 30 or less | 30 or less | 30 or less |
| | *1 ms 3-position | 60 or less | 60 or less | 60 or less | 60 or less |

*1: The response time is the value at 0.5 MPa working pressure, with no lubrication, and with the power ON. It depends on the pressure and the lubricant quality.

Weight

| Item | | | 4KB1 | 4KB2 | 4KB3 | 4KB4 |
|--------|------------|-------------------|------|------|------|------|
| Weight | g | 2-position Single | 104 | 200 | 353 | 579 |
| | | Double | 144 | 240 | 454 | 689 |
| | 3-position | 154 | 255 | 493 | 759 | |

Flow characteristics

| Model No. | Solenoid position | C [dm ³ / (s·bar)] | b | |
|-----------|-------------------|-------------------------------|------|------|
| 4KB1 | 2-position | 0.89 | 0.44 | |
| | 3-position | All ports closed | 0.63 | 0.50 |
| | | A/B/R connection | 1.2 | 0.29 |
| | | P/A/B connection | 0.75 | 0.39 |
| 4KB2 | 2-position | 2.7 | 0.24 | |
| | 3-position | All ports closed | 2.4 | 0.29 |
| | | A/B/R connection | 3.0 | 0.27 |
| | | P/A/B connection | 2.4 | 0.34 |
| 4KB3 | 2-position | 6.3 | 0.26 | |
| | 3-position | All ports closed | 5.6 | 0.27 |
| | | A/B/R connection | 6.6 | 0.20 |
| | | P/A/B connection | 5.9 | 0.27 |
| 4KB4 | 2-position | 12 | 0.24 | |
| | 3-position | All ports closed | 11 | 0.27 |
| | | A/B/R connection | 13 | 0.21 |
| | | P/A/B connection | 10 | 0.22 |

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

Ozone-proof specifications (Ending Page 5)

** - Voltage - **P11**

Copper and PTFE free specifications

● Copper- and PTFE-based materials are not used in the flow path.

** - Voltage - **P6**

CE marking specifications

** - Voltage - **ST**

• Standard voltage of 24 VDC or less is CE marking-compatible even if the model No. is not indicated with "ST".

| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

4KB1 to 4 Series

Discrete valve; sub-plate piping

How to order

4KB2 **1** **0** - **06** - **M1** **B** - **AC100V**

● Single solenoid valve for manifold

4KB1 **1** **9** - **00** - **M1** **B** - **AC100V**

A Model No.

B Solenoid position

C Port size

D Manual override

E Electrical connections
*Refer to page 1263 for the circuit diagram with surge suppressor/lamp.

F Other options

G Voltage

* Gasket/mounting screw included

A Model No.

4KB1 4KB2 4KB3 4KB4

| Code | Description | 4KB1 | 4KB2 | 4KB3 | 4KB4 |
|----------------------------|--------------------------------------|------|------|------|------|
| B Solenoid position | 1 2-position single | ● | ● | ● | ● |
| | 2 2-position double | ● | ● | ● | ● |
| | 3 3-position all ports closed | ● | ● | ● | ● |
| | 4 3-position A/B/R connection | ● | ● | ● | ● |
| | 5 3-position P/A/B connection | ● | ● | ● | ● |

| Port size | Port | Port P/A/B | Port R1/R2 | | | | | |
|------------|-----------|------------|---|--------|------|------|------|------|
| | | | (1) | (2) | (3) | (4) | | |
| C | 06 | Rc1/8 | (1) | (2) | | | | |
| | 08 | Rc1/4 | | (2) | (2) | | | |
| | 10 | Rc3/8 | | | (3) | (3) | | |
| | 15 | Rc1/2 | | | | (4) | | |
| C | Port | Port P/A/B | Port R1/R2 | | | | | |
| | | | (5) = NPT1/8 (6) = NPT1/4 (7) = NPT3/8 (8) = NPT1/2 | | | | | |
| | | | 06N | NPT1/8 | (5) | (6) | | |
| | | | 08N | NPT1/4 | | (6) | (6) | |
| | | | 10N | NPT3/8 | | | (7) | (7) |
| C | Port | Port P/A/B | Port R1/R2 | | | | | |
| | | | (9) = G1/8 (10) = G1/4 (11) = G3/8 (12) = G1/2 | | | | | |
| | | | 06G | G1/8 | (9) | (10) | | |
| | | | 08G | G1/4 | | (10) | (10) | |
| | | | 10G | G3/8 | | | (11) | (11) |
| 15G | G1/2 | | | | (12) | | | |

| D | Description | 4KB1 | 4KB2 | 4KB3 | 4KB4 |
|--------------|-----------------------------|------|------|------|------|
| Blank | Non-locking manual override | ● | ● | ● | ● |
| M1 | Locking manual override | ● | ● | ● | ● |

E Refer to the electrical connections list on the next page.

| F | Description | 4KB1 | 4KB2 | 4KB3 | 4KB4 |
|--------------|-------------------------------------|------|------|------|------|
| Blank | No option | ● | ● | ● | ● |
| K | External pilot (*2) | ● | ● | ● | ● |
| S | Surge suppressor included (*3) (*4) | ● | ● | ● | ● |
| -A | Coolant supported (packing: FKM) | ● | ● | ● | ● |

| G Voltage | Voltage | Standard | Option | | | |
|------------------|---------------|------------------|--------|------|------|------|
| | | | 4KB1 | 4KB2 | 4KB3 | 4KB4 |
| G | AC100V | 100 VAC 50/60 Hz | ● | ● | ● | ● |
| | AC200V | 200 VAC 50/60 Hz | ● | ● | ● | ● |
| | DC24V | 24 VDC | ● | ● | ● | ● |
| | DC12V | 12 VDC | ● | ● | ● | ● |
| | AC110V | 110 VAC 50/60 Hz | ● | ● | ● | ● |
| | AC220V | 220 VAC 50/60 Hz | ● | ● | ● | ● |

| * Other made-to-order products | | | | | |
|---------------------------------------|--|---|---|---|---|
| AC24V | | ● | ● | ● | ● |
| AC115V | | ● | ● | ● | ● |
| AC120V | | ● | ● | ● | ● |

[Table 1] Compact terminal box L/LS compatibility table

| Code | Description | 4KB1 | 4KB2 | 4KB3 | 4KB4 | Surge suppressor | | |
|-----------|--|--|------|------|------|------------------|---|------------|
| L | Without lead wire | With indicator lamp | AC | ● | ● | ● | ● | |
| | | DC | | | ● | ● | | |
| | With surge suppressor and indicator lamp | AC | | | | | | |
| | | DC | ● | ● | | | | Integrated |
| LS | Without lead wire | With surge suppressor and indicator lamp | AC | ● | ● | ● | ● | Integrated |
| | | DC | | | ● | ● | | Integrated |

⚠ Precautions for model No. selection

*1: The DC voltage models of the compact terminal box "L" of 4KB1, 4KB2 are equipped with a surge suppressor.

*2: Consult with CKD when using a vacuum with the external pilot (K).

*3: The surge suppressor for attachment is a suppression connector when the grommet lead wire is 24 VDC or less. (Refer to page 1262.)

*4: The surge suppressor can only be selected when the grommet lead wire or compact terminal box "B" has been selected for the electrical connections.

[Example of model No.]

4KB210-06-M1BK-AC100V

- A** Model : 4KB2
- B** Solenoid position : 2-position single
- C** Port size : Rc1/8
- D** Manual override : Locking manual override
- E** Electrical connections : Compact terminal box/ without lead wire
- F** Other options : External pilot
- G** Voltage : 100 VAC 50/60 Hz

[Electrical connections list]

| | | A Model No. | | | | |
|-----------------------------|---|---|--|------|------|---|
| | | 4KB1 | 4KB2 | 4KB3 | 4KB4 | |
| Code | Description | | | | | |
| E Electrical connections | Grommet lead wire | | | | | |
| | Blank | Grommet lead wire (300 mm) | ● | ● | ● | ● |
| | Compact terminal box | | | | | |
| | B | Without lead wire | ● | ● | ● | ● |
| | L | Without lead wire | Refer to [Table 1] on the previous page for details (*1) | | | |
| | LS | Without lead wire, with surge suppressor/lamp | Refer to [Table 1] on the previous page for details (*1) | | | |
| | C-connector (lead wire lateral direction) | | | | | |
| | 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 | Without lead wire | ● | ● | ● | ● |
| | C2 | Lead wire length (300 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | C20 | Lead wire length (500 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | C21 | Lead wire length (1000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | C22 | Lead wire length (2000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | C23 | Lead wire length (3000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | C3 | Without lead wire, with surge suppressor/lamp | ● | ● | ● | ● |
| | D-connector (lead wire upward direction) | | | | | |
| | 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 | Without lead wire | ● | ● | ● | ● |
| | D2 | Lead wire length (300 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | D20 | Lead wire length (500 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | D21 | Lead wire length (1000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | D22 | Lead wire length (2000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | D23 | Lead wire length (3000 mm) with surge suppressor/lamp | ● | ● | ● | ● |
| | D3 | Without lead wire, with surge suppressor/lamp | ● | ● | ● | ● |

| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G GMF |
| PV5 GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV HSV |
| 2QV 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

4KB1 Series

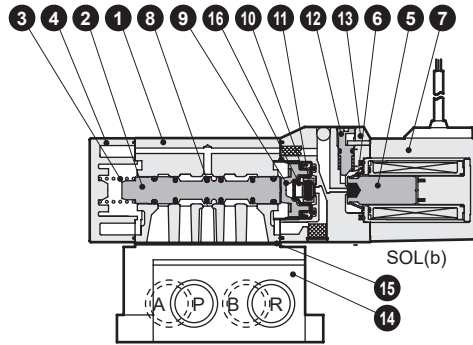
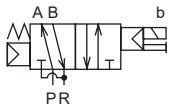
Discrete valve; sub-plate piping

Internal structure and parts list

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP
- NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

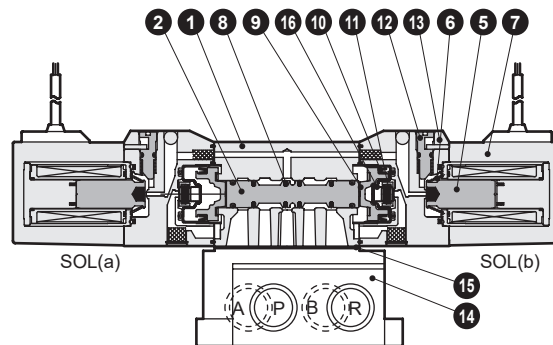
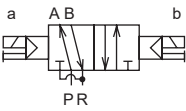
4KB110

● 2-position single



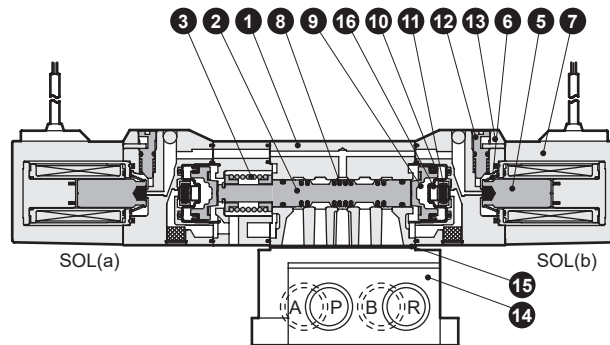
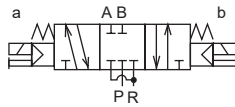
4KB120

● 2-position double



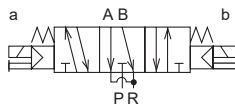
4KB130

● 3-position all ports closed



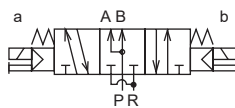
4KB140

● 3-position A/B/R connection



4KB150

● 3-position P/A/B connection



Main parts list

| No. | Part 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 | Nitrile rubber |
| 9 | Piston | Resin |
| 10 | Piston packing | Nitrile rubber |
| 11 | Valve seat | Nitrile rubber |
| 12 | Manual button | Resin |
| 13 | Pilot valve | Resin |
| 14 | Sub-plate | Aluminum alloy die-casting |
| 15 | Gasket | *2 Nitrile rubber |
| 16 | Valve seat spring | Stainless steel |

Main parts list

| No. | Component name | Model No. |
|-----|----------------|--|
| 14 | Sub-plate kit | 4KB110- E Port size - F Exterior Pilot -SUB-BASE-KIT |
| 15 | | |

* Mounting screws are attached to the sub-plate kit.

Repair parts list

| No./part name | 2 8 | 9 10 | 5 6 7 |
|---------------|----------------|-----------------|---|
| Model No. | Spool assembly | Piston assembly | Coil assembly * |
| 4KB110 | 4K9-110 | 4K9-151 | 4K1L- E electrical connection option code - Blank for grommet lead wire |
| 4KB120 | 4K9-118 | | |
| 4KB130 | 4K9-111 | 4K9-152 | COIL - G Voltage |
| 4KB140 | 4K9-112 | | |
| 4KB150 | 4K9-113 | | |

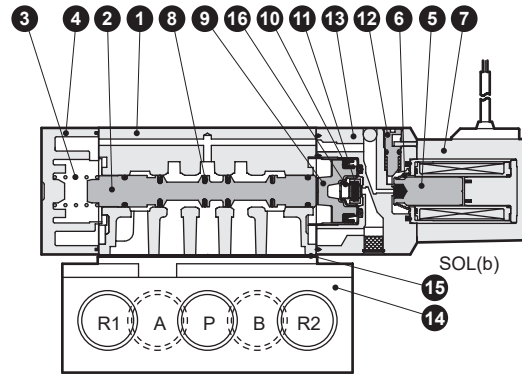
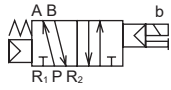
*1: The compact terminal box and connector of the coil assembly will come assembled and attached with the options of the descriptions indicated with model No. selection.

*2: Take care, as gasket 15 mounting has an orientation.

Internal structure and parts list

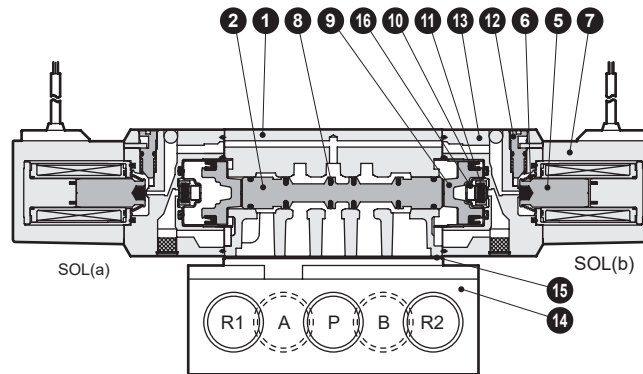
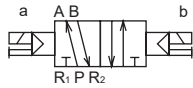
4KB210

● 2-position single



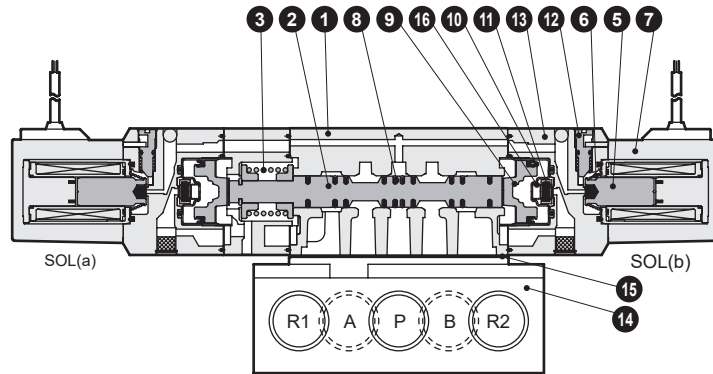
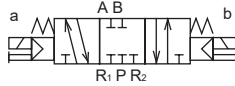
4KB220

● 2-position double



4KB230

● 3-position all ports closed



4KB240

● 3-position A/B/R connection



4KB250

● 3-position P/A/B connection



Main parts list

| No. | Part 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 | Nitrile rubber |
| 9 | Piston | Resin |
| 10 | Piston packing | Nitrile rubber |
| 11 | Valve seat | Nitrile rubber |
| 12 | Manual button | Resin |
| 13 | Pilot valve | Resin |
| 14 | Sub-plate | Aluminum alloy die-casting |
| 15 | Gasket | Nitrile rubber |
| 16 | Valve seat spring | Stainless steel |

Main parts list

| No. | Component name | Model No. |
|-----|----------------|--|
| 14 | Sub-plate kit | 4KB210- B Port size - F Exterior Pilot -SUB-BASE-KIT |
| 15 | | |

* Mounting screws are attached to the sub-plate kit.

Repair parts list

| No./part name | 2 8 | 9 10 | 5 6 7 |
|---------------|----------------|-----------------|--|
| Model No. | Spool assembly | Piston assembly | Coil assembly * |
| 4KB210 | 4K9-150 | 4K9-153 | 4K1L- E electrical connection option code Blank for grommet lead wire COIL - G Voltage |
| 4KB220 | 4K9-126 | | |
| 4KB230 | 4K9-127 | 4K9-154 | |
| 4KB240 | 4K9-128 | | |
| 4KB250 | 4K9-129 | | |

*1: The compact terminal box and connector of the coil assembly will come assembled and attached with the options of the descriptions indicated with model No. selection.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

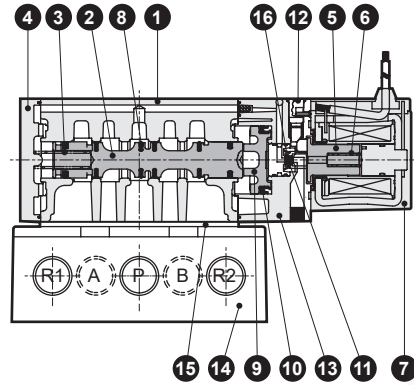
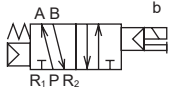
4KB3 Series

Discrete valve; sub-plate piping

Internal structure and parts list

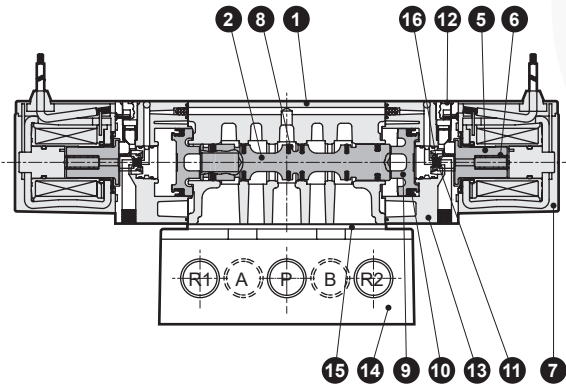
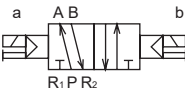
4KB310

● 2-position single



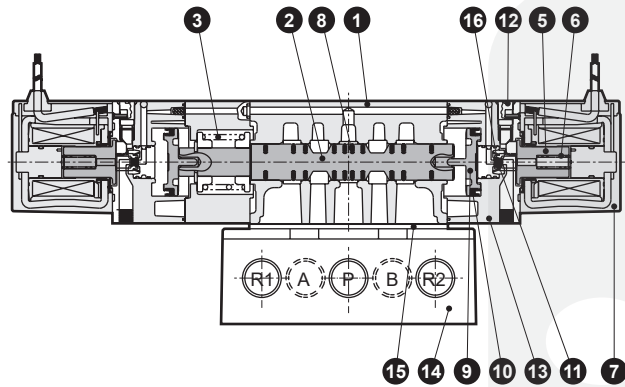
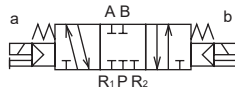
4KB320

● 2-position double



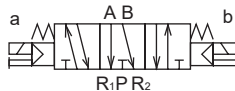
4KB330

● 3-position all ports closed



4KB340

● 3-position A/B/R connection



4KB350

● 3-position P/A/B connection



Main parts list

| No. | Part 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 | Nitrile rubber |
| 9 | Piston | Resin |
| 10 | Piston packing | Nitrile rubber |
| 11 | Valve seat | Nitrile rubber |
| 12 | Manual button | Resin |
| 13 | Pilot valve | Resin |
| 14 | Sub-plate | Aluminum alloy die-casting |
| 15 | Gasket | *2 Nitrile rubber |
| 16 | Valve seat spring | Stainless steel |

Main parts list

| No. | Component name | Model No. |
|-----|----------------|---|
| 14 | Sub-plate kit | 4KB310- <input type="checkbox"/> Port size - <input type="checkbox"/> External pilot - SUB-BASE-KIT |
| 15 | | |

* Mounting screws are attached to the sub-plate kit.

Repair parts list

| No./part name | 2 8 | 9 10 | 5 6 7 |
|---------------|----------------|-----------------|--|
| Model No. | Spool assembly | Piston assembly | Coil assembly *1 |
| 4KB310 | | | |
| 4KB320 | 4K9-133 | 4K9-137 | |
| 4KB330 | | | 4K3- <input type="checkbox"/> electrical connection option code - Blank for grommet lead wire |
| 4KB340 | 4K9-134 | | |
| 4KB350 | 4K9-135 | 4K9-138 | COIL - <input type="checkbox"/> Voltage |

* 1: The terminal box and connector of the coil assembly will come assembled and included with the options of the descriptions indicated with model No. selection.

* 2: Take care, as gasket **15** mounting has an orientation.

Internal structure and parts list

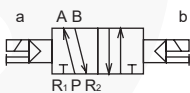
4KB410

● 2-position single



4KB420

● 2-position double



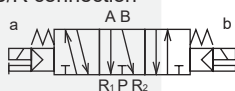
4KB430

● 3-position all ports closed



4KB440

● 3-position A/B/R connection



4KB450

● 3-position P/A/B connection



Main parts list

| No. | Part 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 | Nitrile rubber |
| 9 | Piston | Resin |
| 10 | Piston packing | Nitrile rubber |
| 11 | Valve seat | Nitrile rubber |
| 12 | Manual button | Resin |
| 13 | Pilot valve | Resin |
| 14 | Sub-plate | Aluminum alloy die-casting |
| 15 | Gasket | Nitrile rubber |
| 16 | Valve seat spring | Stainless steel |

Main parts list

| No. | Component name | Model No. |
|-----|----------------|--|
| 14 | Sub-plate kit | 4KB410- B Port size - F External pilot -SUB-BASE-KIT |
| 15 | | |

* Mounting screws are attached to the sub-plate kit.

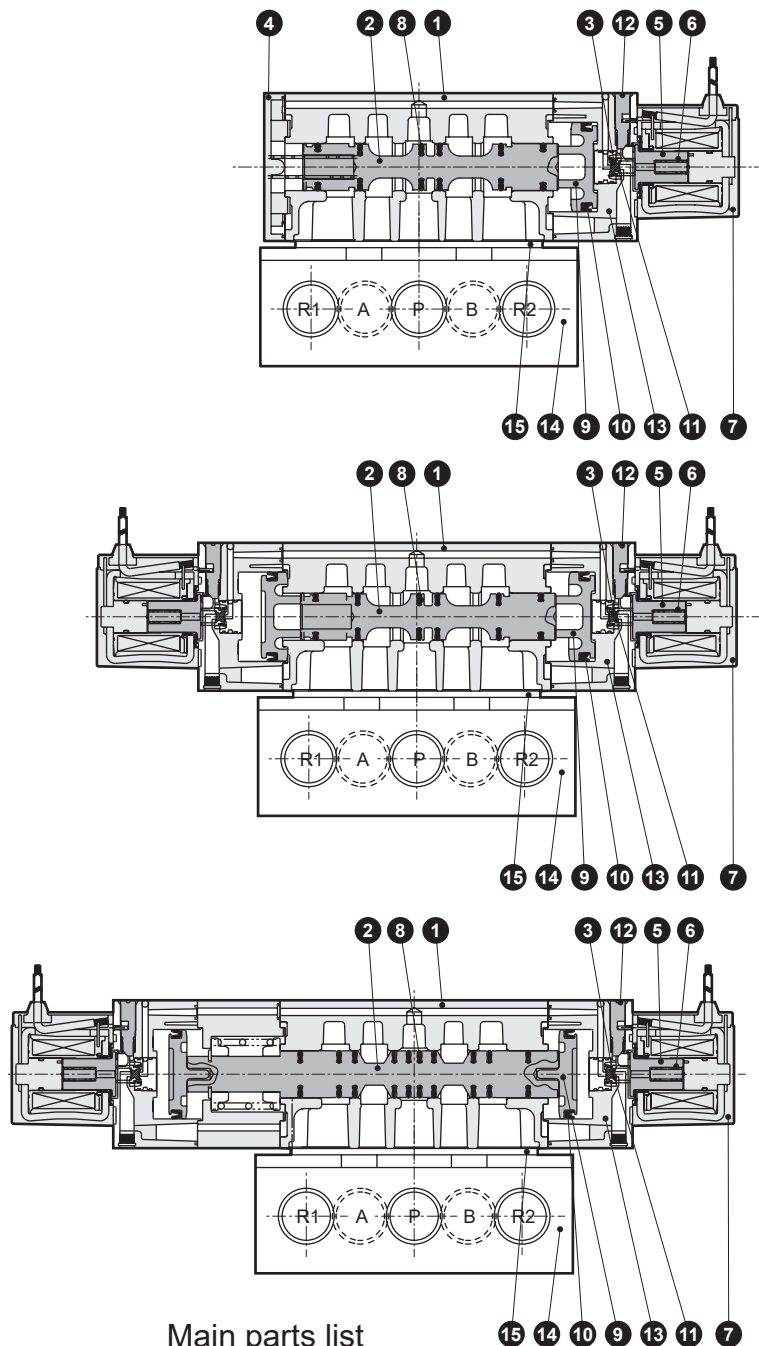
Repair parts list

| No./part name | 2 8 | 9 10 | 5 6 7 |
|---------------|----------------|-----------------|--|
| Model No. | Spool assembly | Piston assembly | Coil assembly * |
| 4KB410 | | | |
| 4KB420 | 4K9-140 | 4K9-144 | 4K3- E electrical connection option code - Blank for grommet lead wire |
| 4KB430 | 4K9-141 | 4K9-145 | COIL - G Voltage |
| 4KB440 | 4K9-142 | | |
| 4KB450 | 4K9-143 | | |

* 1: The plunger assembly is attached with the coil assembly. As there are limitations with the combinations of coils and plungers, do not replace these.

* 2: The terminal box and connector of the coil assembly will come assembled and included with the options of the descriptions indicated with model No. selection.

* 3: When combining a coil assembly into a valve, contact CKD for precautions regarding the work.



4GA/B

M4GA/B

MN4GA/B

4GA/B (master)

4GB

With sensor

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E

MN4E

W4GA/B2

W4GB4

MN3S0

MN4S0

4SA/B0

4KA/B

4KA/B (master)

4F

4F (master)

PV5G

GMF

PV5

GMF

PV5S-0

3Q

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP

NVP

4G*0EJ

4F*0EX

4F*0E

HMV

HSV

2QV

3QV

SKH

Silencer

TotAirSys (Total Air)

TotAirSys (Gamma)

Ending

4KB1 Series

Discrete valve; sub-plate piping

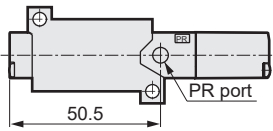
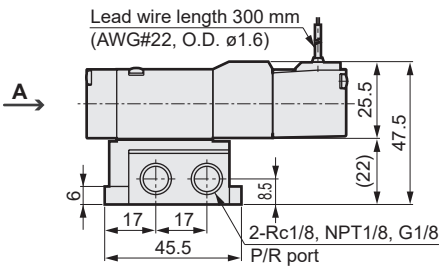
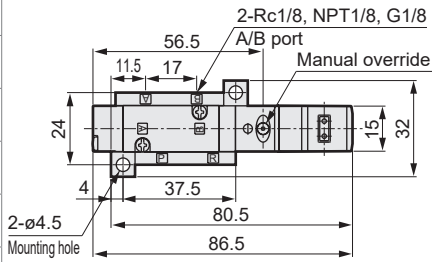
Dimensions



- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B**
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP
- NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

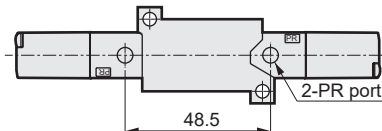
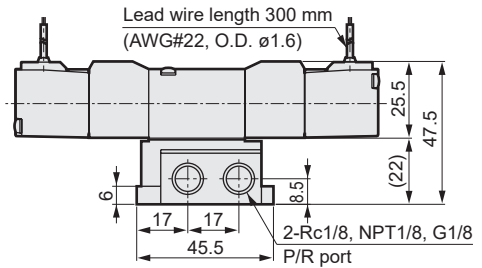
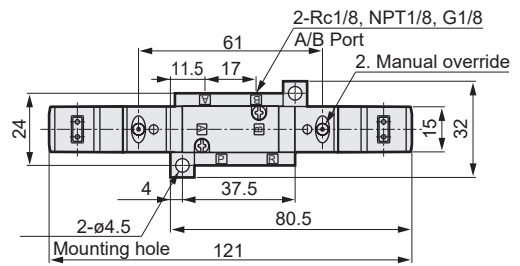
4KB110

● 2-position single: grommet lead wire



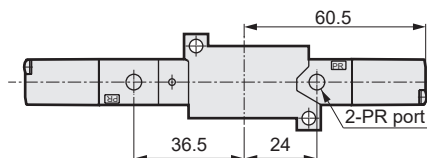
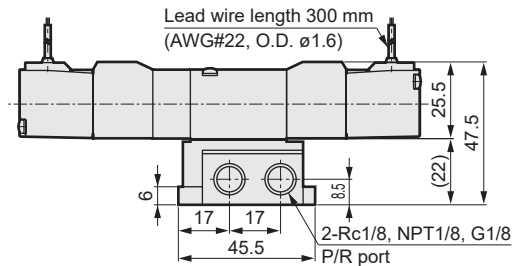
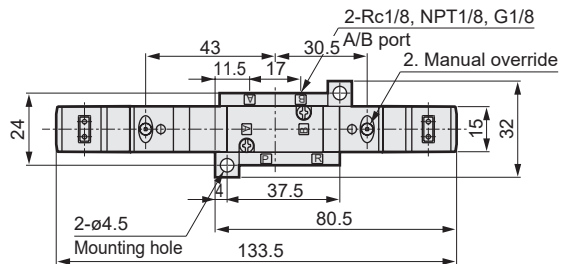
4KB120

● 2-position double: grommet lead wire



4KB140

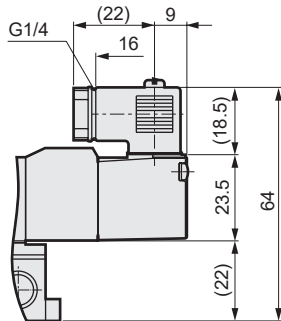
● 3-position: grommet lead wire



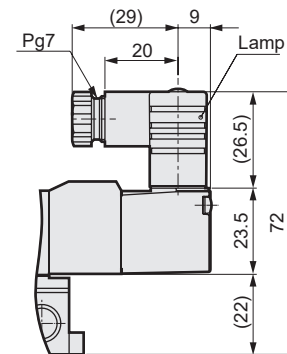
Dimensions

- Compact terminal box: (B [Without lamp]/L/LS [With lamp])

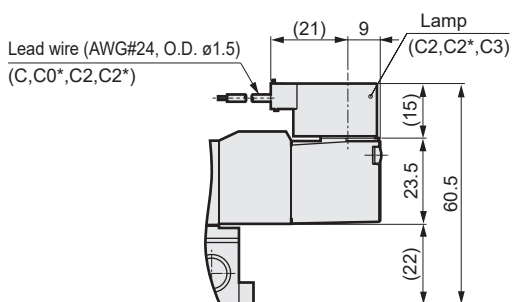
Without indicator lamp



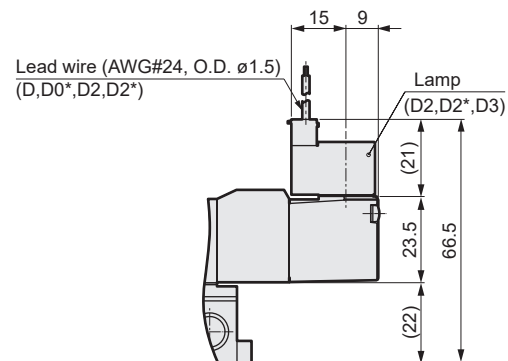
With indicator lamp



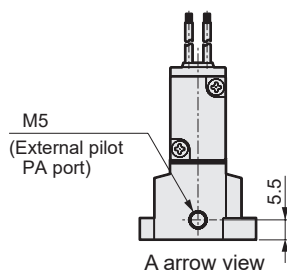
- C-connector: (C/C1/C0*/C2/C2*/C3)



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



- External pilot: (K)



| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

4KB2 Series

Discrete valve; sub-plate piping

Dimensions

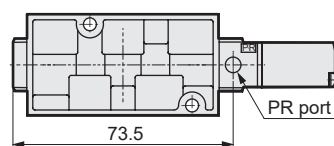
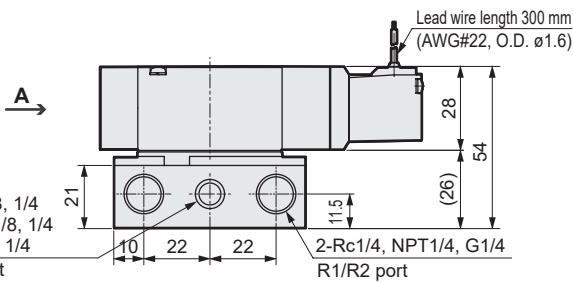
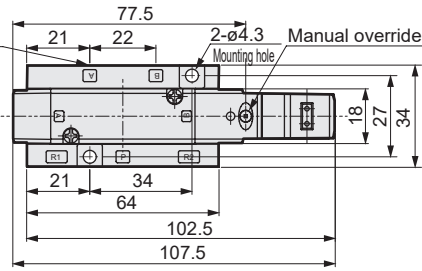


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B**
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP
- NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

4KB210

- 2-position single: grommet lead wire

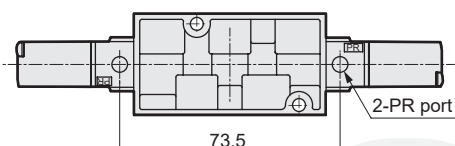
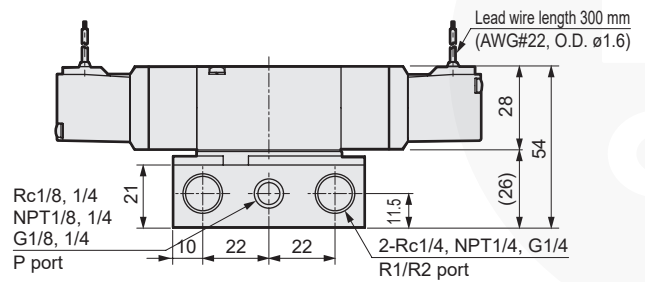
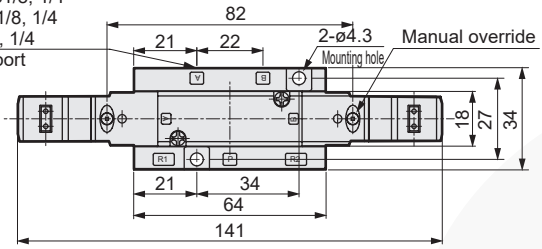
2-Rc1/8, 1/4
NPT1/8, 1/4
G1/8, 1/4
A/B port



4KB220

- 2-position double: grommet lead wire

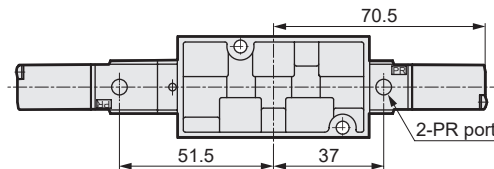
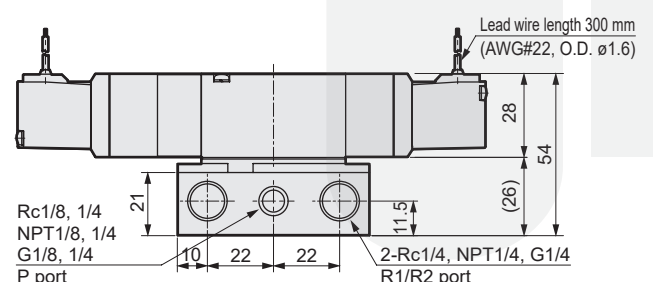
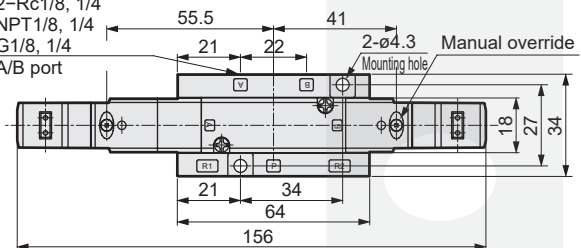
2-Rc1/8, 1/4
NPT1/8, 1/4
G1/8, 1/4
A/B port



4KB240

- 3-position: grommet lead wire

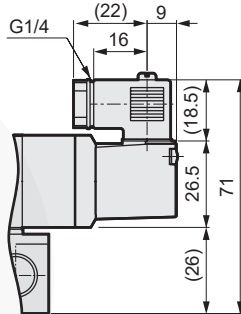
2-Rc1/8, 1/4
NPT1/8, 1/4
G1/8, 1/4
A/B port



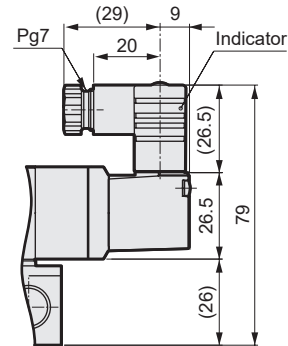
Dimensions

- Compact terminal box: (B [Without lamp]/L/LS [With lamp])

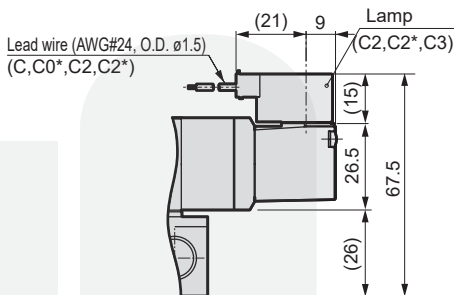
Without indicator lamp



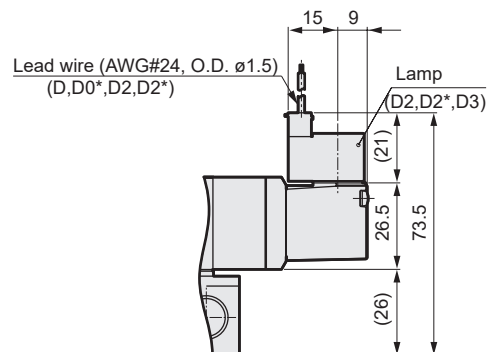
With indicator lamp



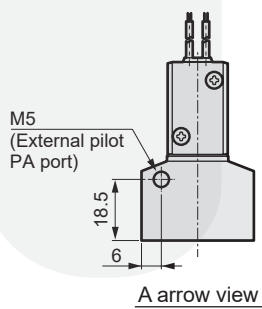
- C-connector: (C/C1/C0*/C2/C2*/C3)



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



- External pilot: (K)



| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

4KB3 Series

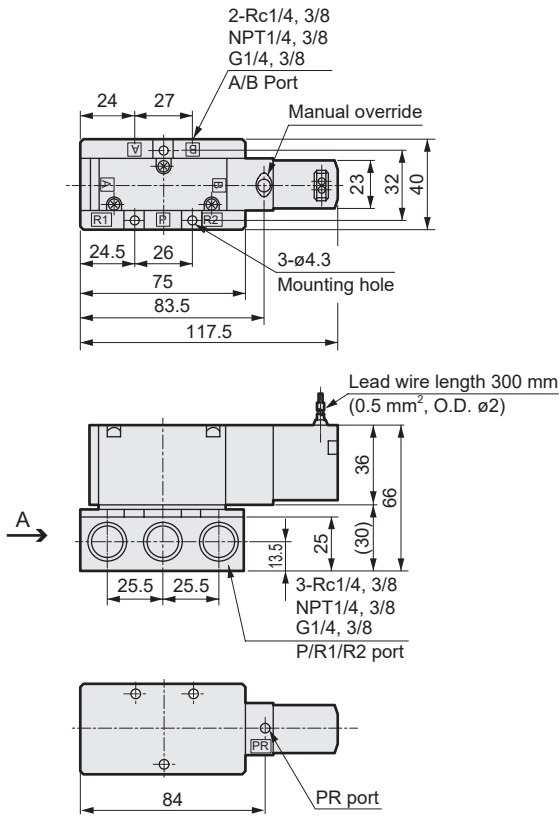
Discrete valve; sub-plate piping

Dimensions 

| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

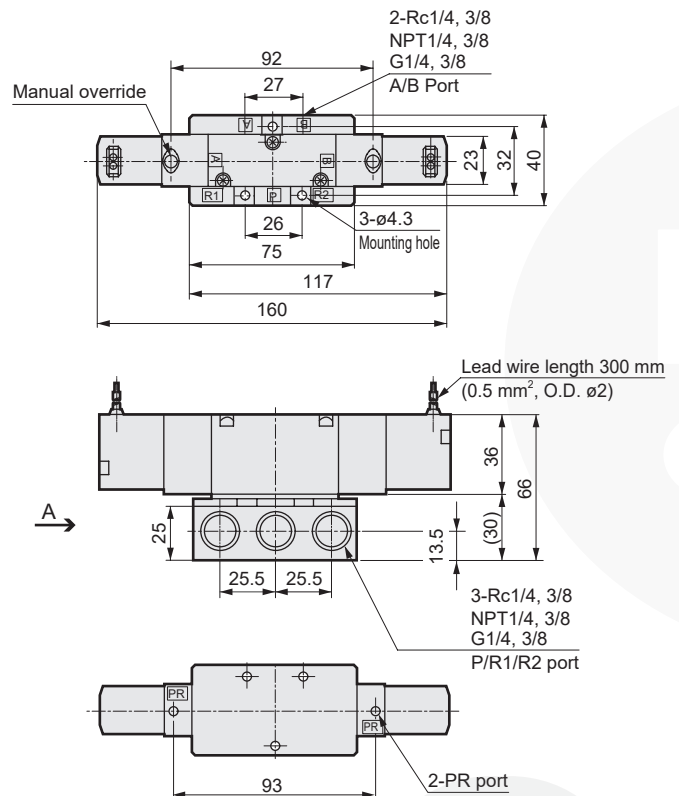
4KB310

● 2-position single: grommet lead wire



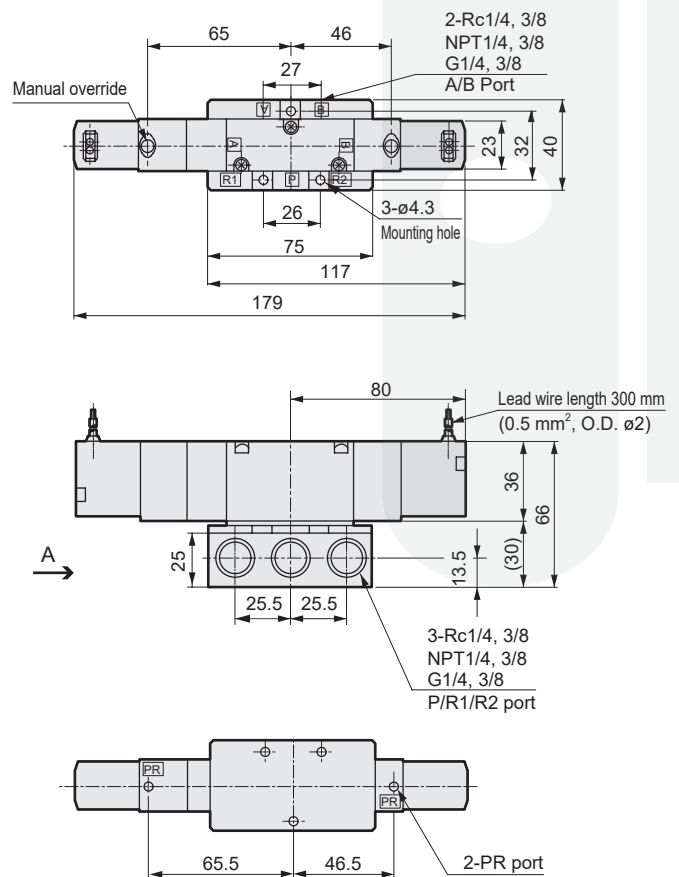
4KB320

● 2-position double: grommet lead wire



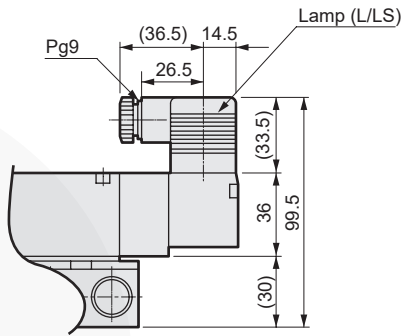
4KB340³/₅

● 3-position: grommet lead wire

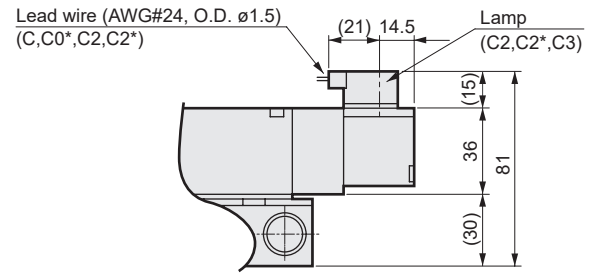


Dimensions

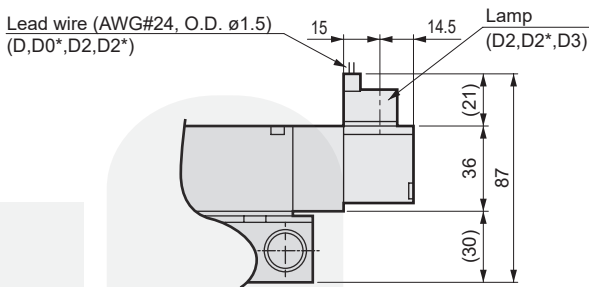
● Terminal box: (B/L/LS)



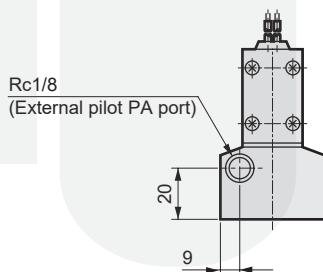
● C-connector: (C/C1/C0*/C2/C2*/C3)



● D-connector: (D/D1/D0*/D2/D2*/D3)



● External pilot: (K)



A arrow view

| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |

4KB4 Series

Discrete valve; sub-plate piping

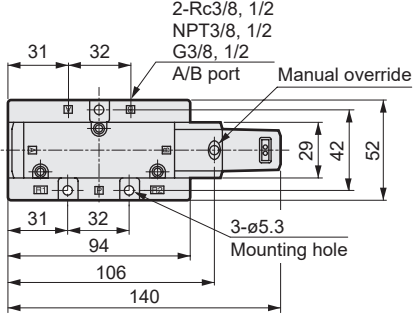
Dimensions



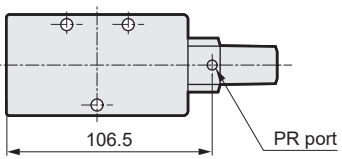
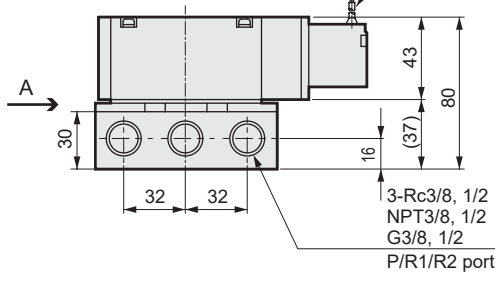
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B**
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3Q
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP
- NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

4KB410

● 2-position single: grommet lead wire

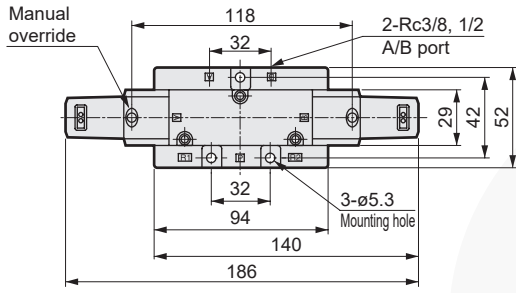


Lead wire length 300 mm
(0.5 mm², O.D. ø2)

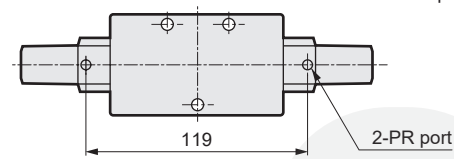
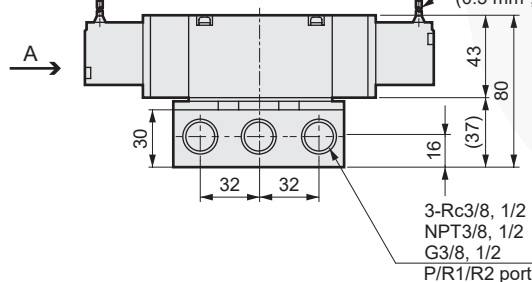


4KB420

● 2-position double: grommet lead wire

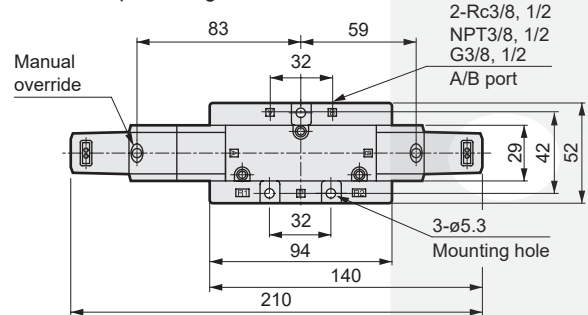


Lead wire length 300 mm
(0.5 mm², O.D. ø2)

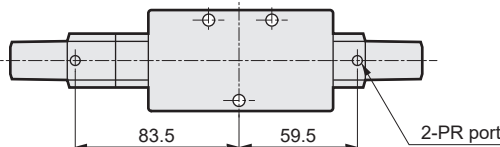
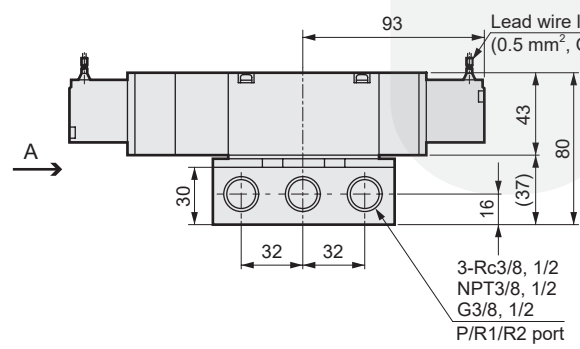


4KB440³/₅

● 3-position: grommet lead wire

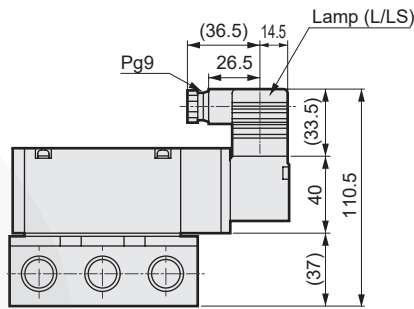


Lead wire length 300 mm
(0.5 mm², O.D. ø2)

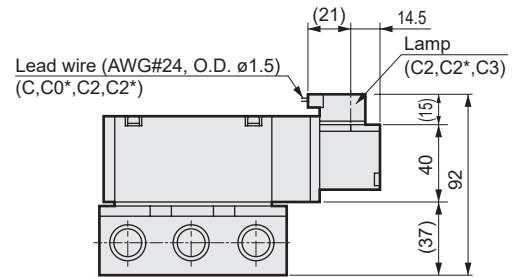


Dimensions

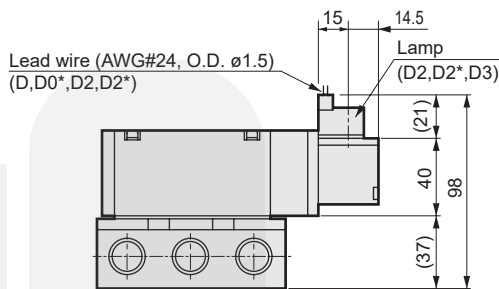
● Terminal box: (B/L/LS)



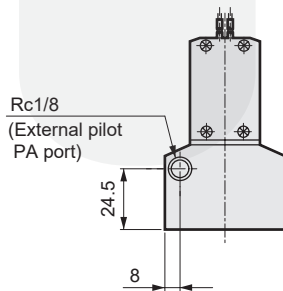
● C-connector: (C/C1/C0*/C2/C2*/C3)



● D-connector: (D/D1/D0*/D2/D2*/D3)



● External pilot: (K)



A arrow view

| |
|-----------------------|
| 4GA/B |
| M4GA/B |
| MN4GA/B |
| 4GA/B (master) |
| 4GB With sensor |
| 4GD/E |
| M4GD/E |
| MN4GD/E |
| 4GA4/B4 |
| MN3E |
| MN4E |
| W4GA/B2 |
| W4GB4 |
| MN3S0 |
| MN4S0 |
| 4SA/B0 |
| 4KA/B |
| 4KA/B (master) |
| 4F |
| 4F (master) |
| PV5G |
| GMF |
| PV5 |
| GMF |
| PV5S-0 |
| 3Q |
| MV3QR |
| 3MA/B0 |
| 3PA/B |
| P/M/B |
| NP/NAP |
| NVP |
| 4G*0EJ |
| 4F*0EX |
| 4F*0E |
| HMV |
| HSV |
| 2QV |
| 3QV |
| SKH |
| Silencer |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Ending |