

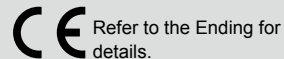
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/
LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/
NVP
4F*0EX
4F*0E
HNV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Ending



Single valve; body piping/sub-plate piping
Direct acting 3-port pneumatic valve

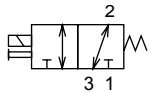
3PA/3PB Series

● Cylinder bore size: $\phi 16$ to $\phi 40$



JIS symbol

● 2-port/universal



Port numbers 1, 2,
and 3 are
Port 1: P, NC
Port 2: A, COM
Port 3: R, NO

Common specifications

1 MPa = 10 bar

Descriptions	Content
Valve and operation	Direct acting poppet valve
Working fluid	Compressed air, low vacuum
Max. working pressure MPa	0.70 (≈ 100 psi, 7 bar)
Min. working pressure KPa	-100 (≈ -15 psi, -1 bar)
Proof pressure MPa	1.05 (≈ 150 psi) (low vacuum: -101 KPa (≈ -15 psi))
Max. working pressure differential MPa	0.70 (≈ 100 psi, 7 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

Descriptions			3PA1 3PB1	3PA2 3PB2
Rated voltage	AC		100, 200 (50/60 Hz)	
	V	DC	24	
Voltage fluctuation range			±10%	
Starting current A	AC	100 V	0.032 / 0.027	0.068 / 0.054
	AC	200 V	0.016 / 0.014	0.034 / 0.027
	DC	24 V	-	-
Holding current A	AC	100 V	0.028 / 0.022	0.041 / 0.032
	AC	200 V	0.014 / 0.011	0.021 / 0.016
	DC	24 V	0.075	0.075
Power consumption W (With indicator lamp)	AC	100 V	1.8 / 1.4 (2.0 / 1.6)	2.2 / 1.8 (2.4 / 2.0)
	AC	200 V	1.8 / 1.4 (2.0 / 1.6)	2.2 / 1.8 (2.4 / 2.0)
	DC	24 V	1.8 (2.0)	1.8 (2.0)
Thermal class			B (molded coil)	
Temperature rise °C			30 (86°F)	

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

Descriptions	3PA1	3PA2	3PB1	3PB2
Port size *1	M5 ($\phi 4$, $\phi 6$ Push-in fitting)	Rc1/8 ($\phi 6$, $\phi 8$ Push-in fitting)	Rc1/8	Rc1/8, 1/4
Response time *2 ms	20 or less	20 or less	20 or less	20 or less
Weight g	54	127	84	175

*1: () shows options. As G and NPT threads can also be used for piping port screws, contact CKD for details.

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

Flow characteristics

Model No.	Port 1 $\rightarrow$ 2		Port 2 $\rightarrow$ 1		Port 2 $\rightarrow$ 3		Port 3 $\rightarrow$ 2	
	$C[\text{dm}^3/(\text{s}\cdot\text{bar})]$	b	$C[\text{dm}^3/(\text{s}\cdot\text{bar})]$	b	$C[\text{dm}^3/(\text{s}\cdot\text{bar})]$	b	$C[\text{dm}^3/(\text{s}\cdot\text{bar})]$	b
3PA1	0.34	0.29	0.35	0.42	0.38	0.43	0.35	0.32
3PA2	0.98	0.17	1.0	0.34	1.1	0.28	1.0	0.20
3PB1	0.37	0.05	0.33	0.21	0.41	0.28	0.42	0.08
3PB2	0.90	0.19	0.97	0.39	1.0	0.26	0.94	0.27

*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**

How to order single valve

● Body piping

3PA1 **1** **0** - **M5** - **M1** **LS** **3**

● Sub-plate piping

3PB2 **1** **0** - **08** - **M1** **LS** **3**

● Solenoid valve for manifold (sub-plate piping)

3PB1 **1** **9** - **00** - **M1** **B** **3** * Gasket/
mounting screw attached

A Model No.

Solenoid position
2-position single

B Port size

C Manual override

D Electrical connections

* For the circuit diagram with
surge suppressor/lamp
refer to page 1560.

*4

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

Code	Content	3PA1	3PA2	3PB1	3PB2	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 : For GS4, screw push-in fitting GWS4-M5-S into the 1, 2, and 3 ports.
- *2 : For GS6, screw push-in fitting GWS6-M5-S (3PA1)/GWS6-M5-S (3PA2) into the 1, 2, and 3 ports.
- *3 : For GS8, screw push-in fitting GWS8-6 into the 1, 2, and 3 ports.
- *4 : The lead wire used is AWG 20 to 24 size.
- *5 : The surge suppressor for attachment is a suppression connector when the grommet lead wire is 24 VDC or less. (Refer to page 1559.)
- *6 : 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.]

3PA210-06-M1BP-3

A Model: 3PA2 (body piping)

Solenoid position : 2-position single

B Port size : Rc1/8

C Manual override : Locking manual override

D Electrical connections : Terminal box

E Other options : With mounting plate

F Voltage : 24 VDC

A Model No.
Body piping Sub-plate piping

Code	Content	3PA1	3PA2	3PB1	3PB2
B Port size	M5 M 5	●			
	06 Rc1/8		●	●	●
	08 Rc1/4				●
	GS4 φ4 Push-in fitting *1	●			
	GS6 φ6 Push-in fitting *2	●	●		
	GS8 φ8 Push-in fitting *3		●		
C	Blank Non-locking manual override	●	●	●	●
	M1 Locking manual override	●	●	●	●
D 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] at left for details.			
	LS No lead wire, with surge suppressor/lamp				
	C type connector (lead wire lateral direction)				
	C Lead wire (300 mm)	●	●	●	●
	C00 Lead wire (500 mm)	●	●	●	●
	C01 Lead wire (1000 mm)	●	●	●	●
	C02 Lead wire (2000 mm)	●	●	●	●
	C03 Lead wire (3000 mm)	●	●	●	●
	C1 Without lead wire	●	●	●	●
	C2 Lead wire (300 mm), surge suppressor/indicator lamp	●	●	●	●
	C20 Lead wire (500 mm), surge suppressor/indicator lamp	●	●	●	●
	C21 Lead wire (1000 mm), surge suppressor/indicator lamp	●	●	●	●
	C22 Lead wire (2000 mm), surge suppressor/indicator lamp	●	●	●	●
	C23 Lead wire (3000 mm), surge suppressor/indicator lamp	●	●	●	●
	C3 Lead/no lead wire, surge suppressor/indicator lamp	●	●	●	●
	D type connector (lead wire upward direction)				
	D Lead wire (300 mm)	●	●	●	●
	D00 Lead wire (500 mm)	●	●	●	●
	D01 Lead wire (1000 mm)	●	●	●	●
	D02 Lead wire (2000 mm)	●	●	●	●
	D03 Lead wire (3000 mm)	●	●	●	●
	D1 Without lead wire	●	●	●	●
	D2 Lead wire (300 mm), surge suppressor/indicator lamp	●	●	●	●
	D20 Lead wire (500 mm), surge suppressor/indicator lamp	●	●	●	●
	D21 Lead wire (1000 mm), surge suppressor/indicator lamp	●	●	●	●
	D22 Lead wire (2000 mm), surge suppressor/indicator lamp	●	●	●	●
	D23 Lead wire (3000 mm), surge suppressor/indicator lamp	●	●	●	●
	D3 No lead wire, with surge suppressor/indicator lamp	●	●	●	●
E	Blank Without mounting plate	●	●		
	P With mounting plate	●	●		
	S Surge suppressor attached *5, *6	●	●	●	●
F Voltage	1 100 VAC 50/60 Hz	●	●	●	●
	2 200 VAC 50/60 Hz	●	●	●	●
	3 24 VDC	●	●	●	●
	AC110V 110 VAC 50/60 Hz	●	●	●	●
	AC220V 220 VAC 50/60 Hz	●	●	●	●
	4 12 VDC	●	●	●	●
* Other custom order products					
AC24V		●	●	●	●
AC115V		●	●	●	●
AC120V		●	●	●	●

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/
LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/
NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Ending

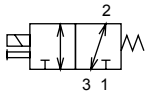
3PA Series

Single valve; body piping

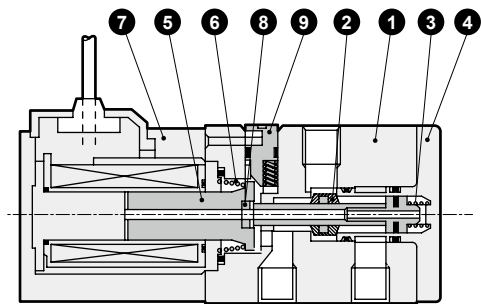
Internal structure and parts list

3PA110

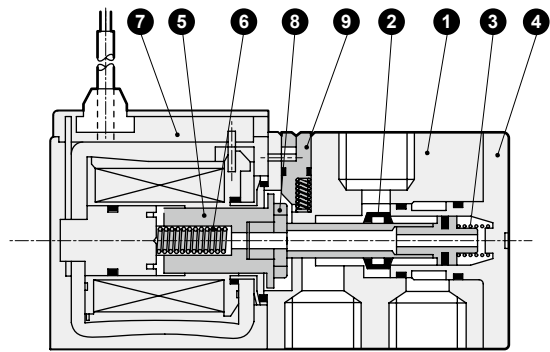
● 2-position single



* Port numbers 1, 2, and 3 are
Port 1: P, NC
Port 2: A, COM
Port 3: R, NO



3PA210



Main parts list

No.	Part name	Material
1	Body	Aluminum alloy die-casting
2	Valving element (stem assembly)	-
3	Valve spring	Stainless steel
4	Cap	Resin
5	Plunger	Stainless steel
6	Plunger spring	Stainless steel
7	Coil assembly	-
8	Knock	Resin
9	Manual button	Resin

Repair parts list

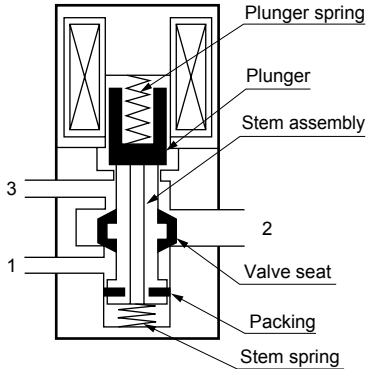
No./part name Model No.	5 6 7 8 Coil assembly *
3PA110	3P1 - electrical connections - COIL - voltage Blank for grommet lead wire
3PA210	3P2 - electrical connections - COIL - voltage Blank for grommet lead wire

* 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 compact terminal box and connector of the coil assembly will come assembled and attached with the options indicated with How to order.
* 3: When combining a coil assembly into a valve, contact CKD for precautions regarding the work.

Operational principle

3P Series structure is a pressure balanced type poppet valve, which is not affected by the working pressure and achieves a low wattage large flow rate performance.
Port can be pressurized from any of ports 1, 2, or 3.
The stem assembly valve seat and packing have the same diameter, so each port pressure differential is canceled by the stem assembly's through hole and pressure is balanced at both ON and OFF.

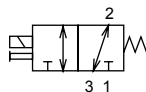
● When not energized
The stem assembly is pushed toward port 1 side by the plunger spring force transmitted by the plunger.
Port 1 is closed due to the stem assembly valve seat and packing. Ports 2 and 3 are opened.



Internal structure and parts list

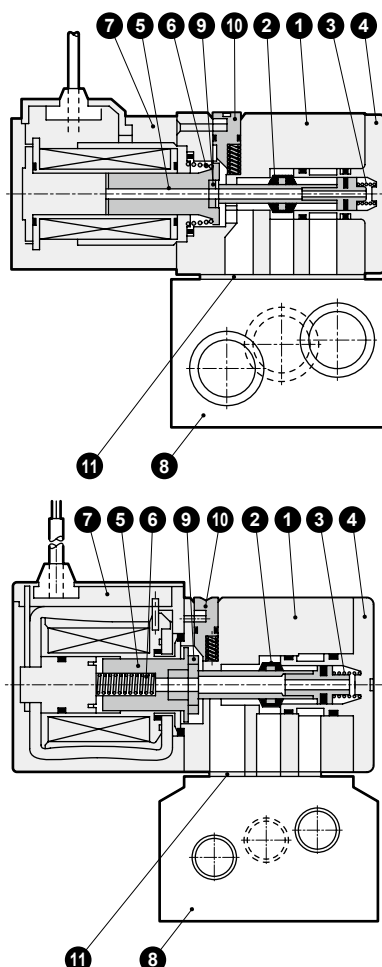
3PB110

● 2-position single



* Port numbers 1, 2 and 3 are
Port 1: P, NC
Port 2: A, COM
Port 3: R, NO

3PB210



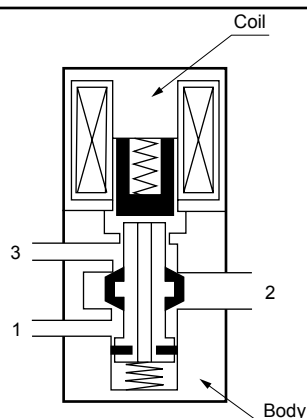
Main parts list

No.	Part name	Material
1	Body	Aluminum alloy die-casting
2	Valving element (stem assembly)	-
3	Valve spring	Stainless steel
4	Cap	Resin
5	Plunger	Stainless steel
6	Plunger spring	Stainless steel
7	Coil assembly	-
8	Sub-plate	Aluminum alloy die-casting
9	Knock	Resin
10	Manual button	Resin
11	Gasket	Nitrile rubber

Repair parts list

No./part name Model No.	5 6 7 9 Coil assembly *
3PB110	3P1 - electrical connections - COIL - voltage Blank for grommet lead wire
3PB210	3P2 - electrical connections - COIL - voltage Blank for grommet lead wire

* 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 compact terminal box and connector of the coil assembly will come assembled and attached with the options indicated with How to order.
* 3: When combining a coil assembly into a valve, contact CKD for precautions regarding the work.



● When energized

When energizing the coil, the plunger is adsorbed toward the coil side, while the stem assembly is moved by the stem spring force and Ports 1 and 2 are opened. Port 3 is closed.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

3PA1/3PA2 Series

Single valve; body piping

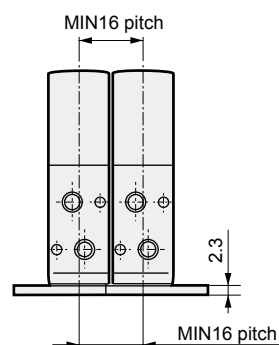
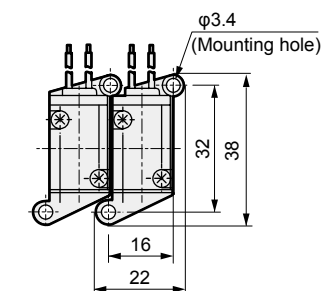
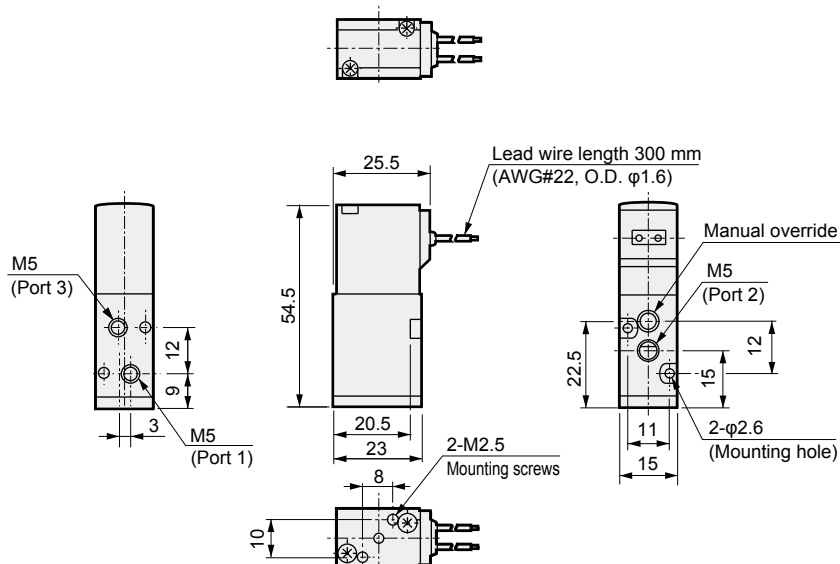
Dimensions



3PA110-M5

● 2-position single: grommet lead wire

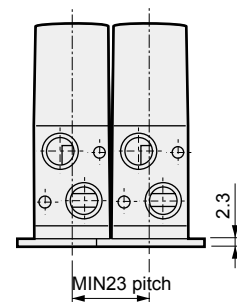
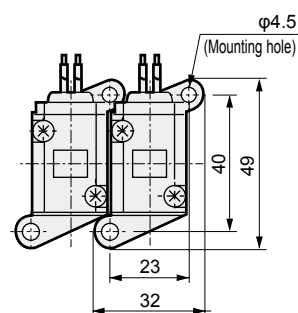
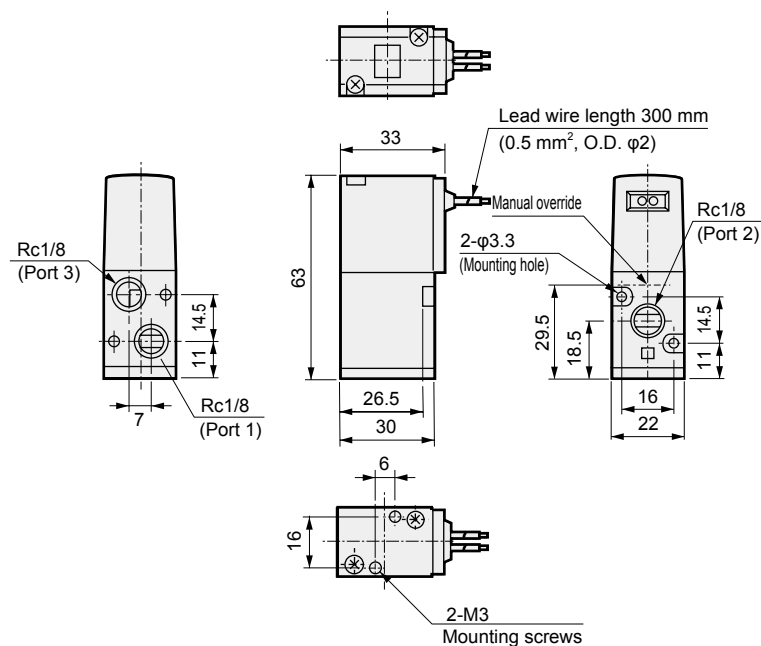
● With mounting plate: (P)



3PA210-06

● 2-position single: grommet lead wire

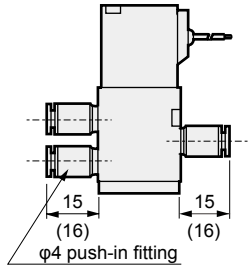
● With mounting plate: (P)



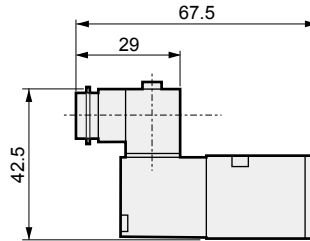
Dimensions

For 3PA1

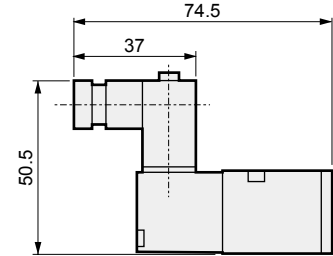
- $\phi 4$, $\phi 6$ push-in fitting: (GS4/GS6)



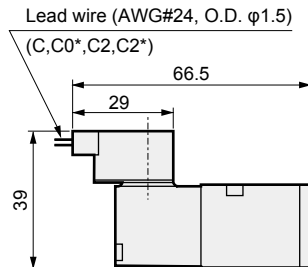
- Terminal box: (B)



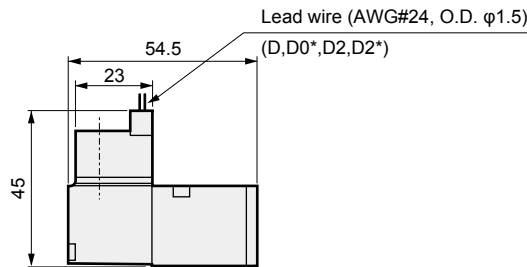
- Terminal box with lamp: (L/LS)



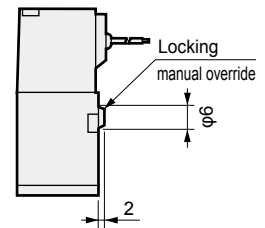
- C type connector: (C/C1/C2/C3)



- D type connector: (D/D1/D2/D3)

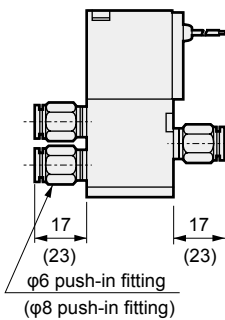


- Locking manual override: (M1)

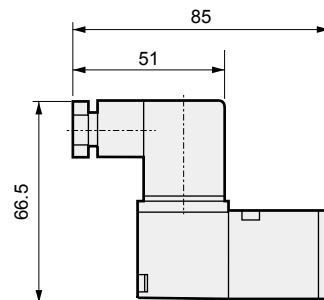


For 3PA2

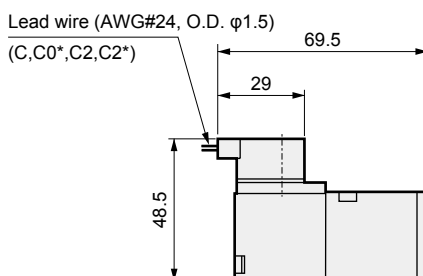
- $\phi 6$, $\phi 8$ push-in fitting: (GS6/GS8)



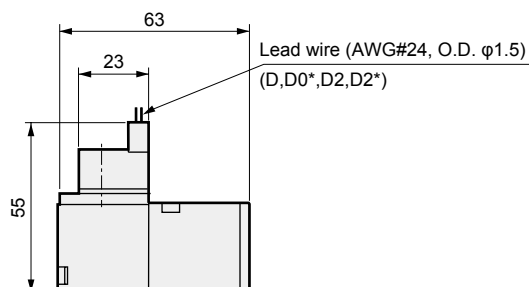
- Terminal box: (B/L/LS)



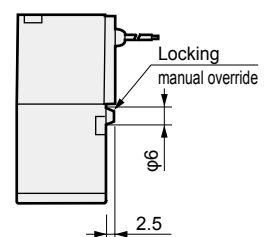
- C type connector: (C/C1/C2/C3)



- D type connector: (D/D1/D2/D3)



- Locking manual override: (M1)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

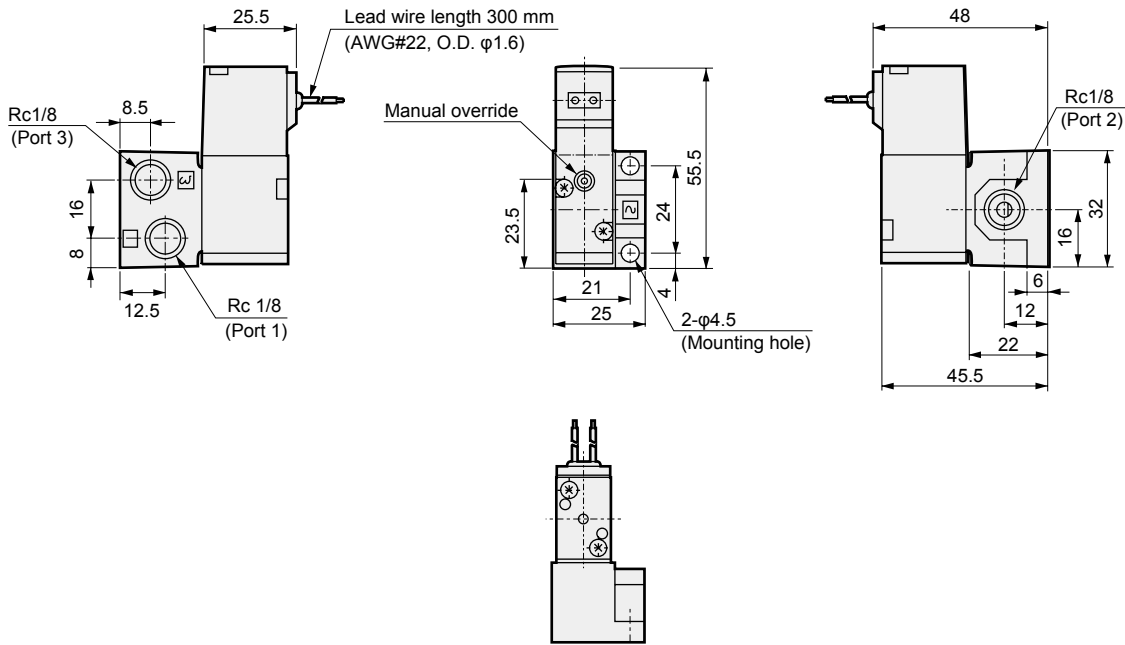
3PB1/3PB2 Series

Single valve; sub-plate piping

Dimensions

3PB110-06

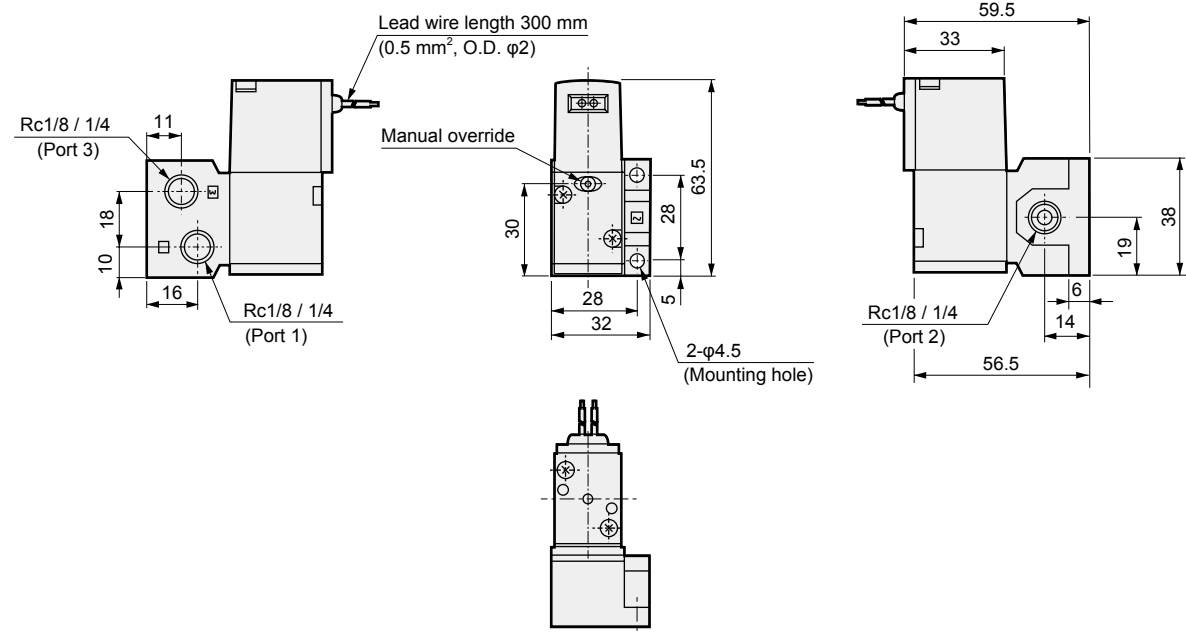
● 2-position single: grommet lead wire



3PB210-06

08

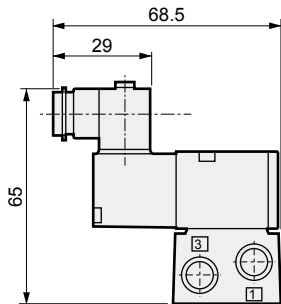
● 2-position single: grommet lead wire



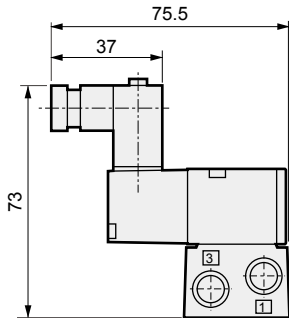
Dimensions

For 3PB1

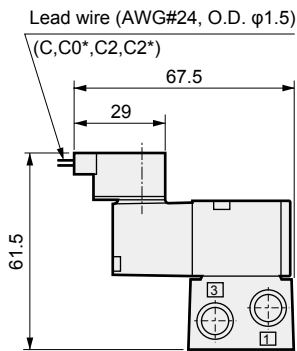
● Terminal box: (B)



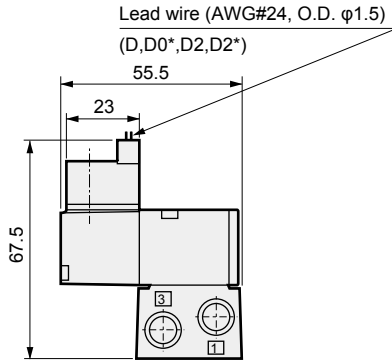
● Terminal box with lamp: (L/LS)



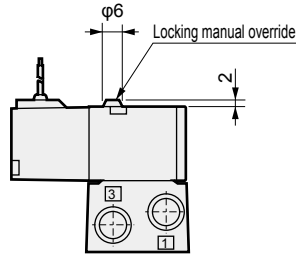
● C type connector: (C/C1/C2/C3)



● D type connector: (D/D1/D2/D3)

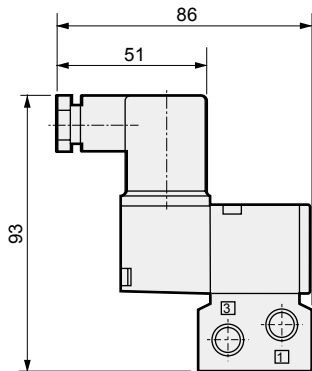


● Locking manual override: (M1)

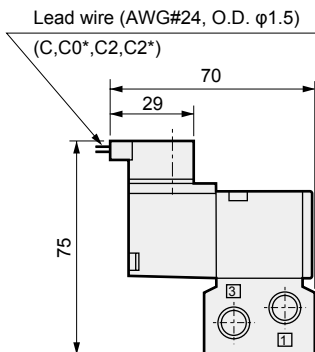


For 3PB2

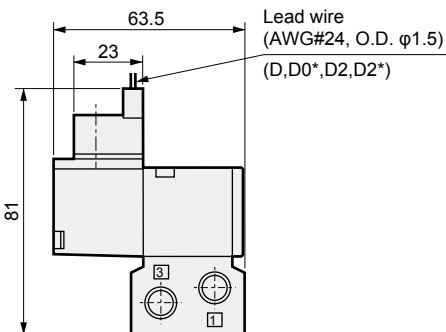
● Terminal box: (B/L/LS)



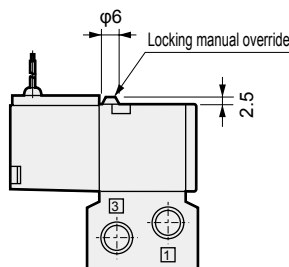
● C type connector: (C/C1/C2/C3)



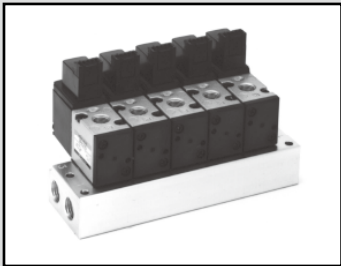
● D type connector: (D/D1/D2/D3)



● Locking manual override: (M1)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



Individual wiring manifold body piping / sub-plate piping
Direct acting 3-port pneumatic valve

M3PA/M3PB Series

● Cylinder bore size: $\phi 16$ to $\phi 40$

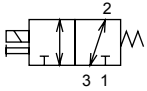


Refer to the Ending for details.



JIS symbol

● 2-port/universal



Port numbers 1, 2, and 3 are
Port 1: P, NC
Port 2: A, COM
Port 3: R, NO

Common specifications 1 MPa = 10 bar

Descriptions	Content
Manifold method	Sub-plate integrated
Station No.	2 to 20 stations
Valve and operation	Direct acting poppet valve
Working fluid	Compressed air, low vacuum
Max. working pressure MPa	0.70 (≈100 psi, 7 bar)
Min. working pressure KPa	-100 (≈-15 psi, -1 bar)
Proof pressure MPa	1.05 (≈0.15 psi) (low vacuum: -101 kPa (≈-15 psi))
Max. working Press Diff. (MPa)	0.70 (≈100 psi, 7 bar)
Ambient temperature °C	-5 (23°F) to 50 (122°F) (no freezing)
Fluid temperature °C	5 (41°F) to 50 (122°F)
Lubrication	Not required
Degree of protection	Dust-proof
Shock 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

Descriptions			3PA1 3PB1	3PA2 3PB2
Rated voltage	AC		100, 200 (50 / 60 Hz)	
V	DC		24	
Voltage fluctuation range			±10%	
Starting current A	AC	100 V	0.032 / 0.027	0.068 / 0.054
	AC	200 V	0.016 / 0.014	0.034 / 0.027
	DC	24 V	-	-
Holding current A	AC	100 V	0.028 / 0.022	0.041 / 0.032
	AC	200 V	0.014 / 0.011	0.021 / 0.016
	DC	24 V	0.075	0.075
Power consumption W (With indicator lamp)	AC	100 V	1.8 / 1.4 (2.0 / 1.6)	2.2 / 1.8 (2.4 / 2.0)
	AC	200 V	1.8 / 1.4 (2.0 / 1.6)	2.2 / 1.8 (2.4 / 2.0)
	DC	24 V	1.8 (2.0)	1.8 (2.0)
Thermal class			B (molded coil)	
Temperature rise °C			30 (86°F)	

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

Descriptions		M3PA1	M3PA2	M3PB1	M3PB2	
Manifold		Port 2 : Individual Port 1/3: Common	Port 2 : Individual Port 1/3: Common	Port 2 : Individual	Port 2 : Individual	
				Port 1/3: Common	Port 1/3: Common	
				Port 2/3: Individual	Port 2/3: Individual	
				Port 1 : Common	Port 1 : Common	
				Port 1/2: Individual Port 3 : Common	Port 1/2: Individual Port 3 : Common	
Port size *1	Port 1	Rc1/4	Rc1/4	Common: Rc1/4 Individual: Rc1/8	Common: Rc1/4 Individual: Rc1/8	
	Port 2	M 5 (φ4, φ6 push-in fitting)	Rc1/8 (φ6, φ8 push-in fitting)	Rc1/8 (φ4, φ6 push-in fitting)	Rc1/8 (φ6, φ8 push-in fitting)	
	Port 3	Rc 1/4	Rc 1/4	Common: Rc1/4 Individual: Rc1/8	Common: Rc1/4 Individual: Rc1/8	
Response time *2		ms	20 or less	20 or less	20 or less	20 or less
Weight (n: station No.)		g	104×n+48	184×n+46	102×n+48	182×n+45

*1: As G and NPT threads can also be used for piping port screws, contact CKD for details.

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

Ozone-proof specifications (Ending Page 5)

** - Voltage - **P11**

Flow characteristics

Model No.	Port 1→2		Port 2→1		Port 2→3		Port 3→2	
	C[dm³/(s·bar)]	b	C[dm³/(s·bar)]	b	C[dm³/(s·bar)]	b	C[dm³/(s·bar)]	b
M3PA1	0.38	0.17	0.37	0.46	0.47	0.45	0.40	0.18
M3PA2	0.93	0.25	1.0	0.35	1.1	0.32	0.97	0.31
M3PB1	0.36	0.22	0.32	0.43	0.33	0.48	0.31	0.24
M3PB2	0.86	0.25	0.93	0.38	0.94	0.22	0.88	0.27

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

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M3PA/M3PB Series

Individual wiring manifold

How to order individual wiring manifold

- Solenoid valve for manifold (body piping)

3PA1 1 9 - M5 - M1 B — **3** * Gasket/mounting screw attached

- Solenoid valve for manifold (sub-plate piping)

3PB1 1 9 - 00 - M1 B — **3** * Gasket/mounting screw attached

- Manifold

M 3PB1 1 0 - 06 - M1 B - 7 - 3 - 5 2

Indicate the valve function based quantity display position for when using a mix manifold. Refer to the following page.

A Model No.

B Solenoid position

C Port size

* : The values of port size port 1/3 are,
(1) 1/3 = Rc1/4 common
(2) 1 = Rc1/4 common, 3 = Rc1/8 individual
(3) 1 = Rc1/8 individual, 3 = Rc1/4 common

E Electrical connections

* For the circuit diagram with surge suppressor/lamp, refer to page 1560.
*4

- For how to order masking plates, refer to the next page.

D Manual override

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

Code	Content	3PA1	3PA2	3PB1	3PB2	Surge suppressor
L	Without lead wire	AC	●	●	●	●
		DC	●	●	●	●
		AC	●	●	●	●
		DC	●	●	●	●
LS	Without lead wire	AC	●	●	●	●
		DC	●	●	●	●
		AC	●	●	●	●
		DC	●	●	●	●

⚠ Precautions for model No. selection

- *1 : For GS4, screw push-in fitting GWS4-M5-S (3PA1)/GWJS4-6 (3PB1) into the 2 port.
- *2 : For GS6, screw push-in fitting GWS6-M5-S (3PA1)/GWJS6-6(3PA2)/GWJS6-6(3PB1) into the 2 port.
- *3 : For GS8, screw push-in fitting GWS8-6(3PA2, 3PB2) into Port 2.
- *4 : The lead wire used is AWG20 to 24 size.
- *5 : The surge suppressor for attachment is a suppression connector for 24 VDC or less. (Refer to page 1559.)
- *6 : 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.]

M3PA210-06-S-7-1

A Model: M3PA2 (body piping)

B Solenoid position : 2-position single

C Port size : Port 2 Rc1/8

D Manual override : Non-locking manual override

E Electrical connections: Grommet lead wire

F Other options : Surge suppressor attached

G Station No. : 7 stations

H Voltage : 100 VAC

Code	Content	3PA1	3PA2	3PB1	3PB2
B 1	2-position single	●	●	●	●
8	Mix manifold (for multiple solenoid positions)	●	●	●	●

Port size	Port 2 individual	Port 1/3	3PA1	3PA2	3PB1	3PB2
M5	M 5	(1)	(1)	(1)	(1)	(1)
06	Rc1/8	(1)	(1)	(1)	(1)	(1)
GS4	φ4 push-in fitting *1	(1)	(1)	(1)	(1)	(1)
GS6	φ6 push-in fitting *2	(1)	(1)	(1)	(1)	(1)
GS8	φ8 push-in fitting *3	(1)	(1)	(1)	(1)	(1)
06Y	Rc1/8 (rear piping)			(1)	(1)	(1)
06A	Rc1/8			(2)	(2)	(2)
06B	Rc1/8			(3)	(3)	(3)

Blank	Non-locking manual override	●	●	●	●
M1	Locking manual override	●	●	●	●

E	Grommet lead wire	●	●	●	●
Blank	Grommet lead wire (300 mm)	●	●	●	●

B	Without lead wire	●	●	●	●
L	Without lead wire	●	●	●	●
LS	No lead wire, with surge suppressor/lamp	●	●	●	●

C	Lead wire (300 mm)	●	●	●	●
C00	Lead wire (500 mm)	●	●	●	●
C01	Lead wire (1000 mm)	●	●	●	●
C02	Lead wire (2000 mm)	●	●	●	●
C03	Lead wire (3000 mm)	●	●	●	●

C1	Without lead wire	●	●	●	●
C2	Lead wire (300 mm), surge suppressor/indicator lamp	●	●	●	●
C20	Lead wire (500 mm), surge suppressor/indicator lamp	●	●	●	●
C21	Lead wire (1000 mm), surge suppressor/indicator lamp	●	●	●	●
C22	Lead wire (2000 mm), surge suppressor/indicator lamp	●	●	●	●
C23	Lead wire (3000 mm), surge suppressor/indicator lamp	●	●	●	●
C3	No lead wire, with surge suppressor/indicator lamp	●	●	●	●

D	Lead wire (300 mm)	●	●	●	●
D00	Lead wire (500 mm)	●	●	●	●
D01	Lead wire (1000 mm)	●	●	●	●
D02	Lead wire (2000 mm)	●	●	●	●
D03	Lead wire (3000 mm)	●	●	●	●

D1	Without lead wire	●	●	●	●
D2	Lead wire (300 mm), surge suppressor/indicator lamp	●	●	●	●
D20	Lead wire (500 mm), surge suppressor/indicator lamp	●	●	●	●
D21	Lead wire (1000 mm), surge suppressor/indicator lamp	●	●	●	●
D22	Lead wire (2000 mm), surge suppressor/indicator lamp	●	●	●	●
D23	Lead wire (3000 mm), surge suppressor/indicator lamp	●	●	●	●
D3	No lead wire, with surge suppressor/indicator lamp	●	●	●	●

F	No option	●	●	●	●
S	Surge suppressor attached *5, *6	●	●	●	●

G	2 stations	●	●	●	●
to	to	●	●	●	●
20	20 stations	●	●	●	●

H	100 VAC(50/60 Hz)	●	●	●	●
2	200 VAC(50/60 Hz)	●	●	●	●
3	DC 24 V	●	●	●	●

AC110V	110 VAC 50/60 Hz	●	●	●	●
AC220V	220 VAC 50/60 Hz	●	●	●	●
4	DC 12 V	●	●	●	●

* Other custom order products		●	●	●	●
AC24V		●	●	●	●
AC115V		●	●	●	●
AC120V		●	●	●	●

How to order masking plate kit

3PA1 -MP-KIT * Gasket/mounting screw attached

A Model No.

A Model No.
3PA1
3PB1
3PA2
3PB2

How to order mix manifold

M 3PB1 8 0 - 06 - M1 B - 7 - 3 - ^{S1 MP} 5 2
 Mix manifold "8" S1 = 1 to 5, MP = 6 to 7

How to fill in form for ordering a mix manifold

- (1) List the quantity for each function (solenoid position) at the end of How to order. The functions and codes are as shown below.

Example: 2-position single → S1

Code	Function (solenoid position)
S1	2-position single
MP	Masking plate

- ^{S1 MP} 5 2
 List the quantity

- (2) List the function (solenoid position) and layout position in the field for remarks.

Solenoid position code = ○ , ○ th station (where the left side is the 1st station when the piping port is facing forward.)

Example: S1 = 1 to 5 (1st to 5th stations are 2-position single)

[Example of model No.]

For 7 stations

1	2	3	4	5	6	7	Layout position
2-position single	2-position single	2-position single	2-position single	2-position single	Masking plate	Masking plate	
S1	S1	S1	S1	S1	MP	MP	Code

2-position single (S1) : 5 pcs (1st to 5th stations)
 Masking plate : 2 pcs (6th, 7th stations)

↓
M3PB180-06-M1-B-7-3 - ^{S1 MP} 5 2
 S1=1 to 5 MP=6 to 7

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

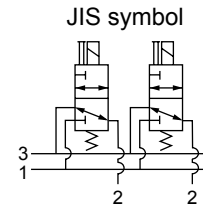
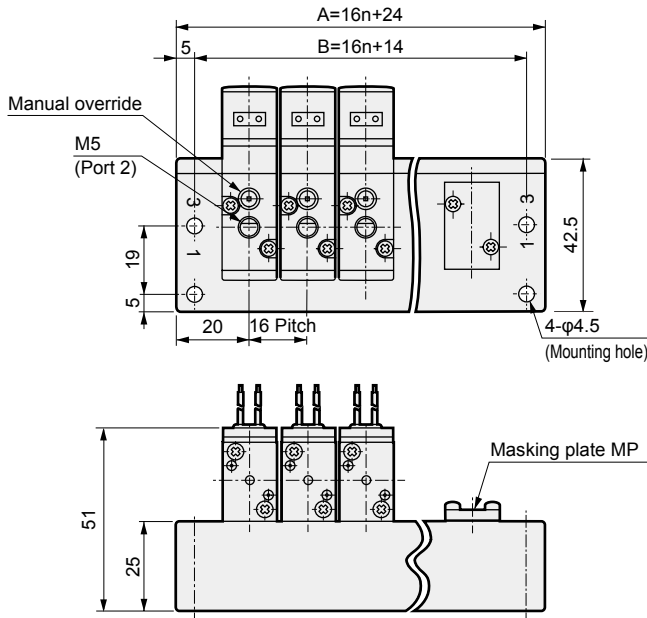
M3PA1/M3PA2 Series

Individual wiring manifold; body piping

Dimensions

M3PA180-M5

● Port 2 - individual piping, port 1/3 - common piping: grommet lead wire

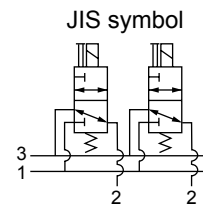
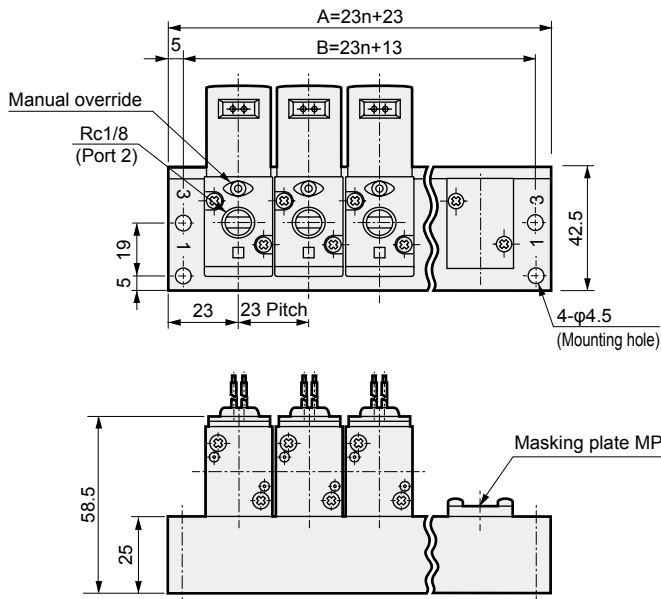


■ Model No. of single unit solenoid valve unit for manifold
3PA119-M5-option-voltage

Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328	344
B	46	62	78	94	110	126	142	158	174	190	206	222	238	254	270	286	302	318	334

M3PA280-06

● Port 2 - individual piping, port 1/3 - common piping: grommet lead wire



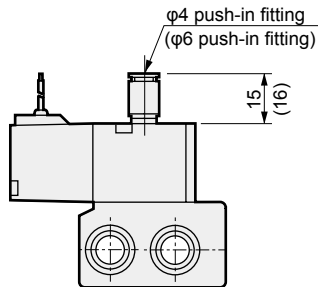
■ Model No. of single unit solenoid valve unit for manifold
3PA219-06-option-voltage

Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391	414	437	460	483
B	59	82	105	128	151	174	197	220	243	266	289	312	335	358	381	404	427	450	473

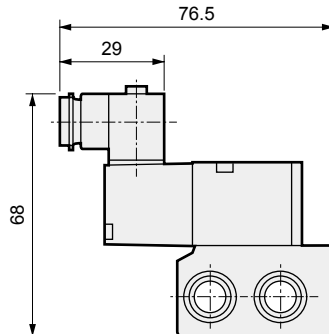
Dimensions

For M3PA1

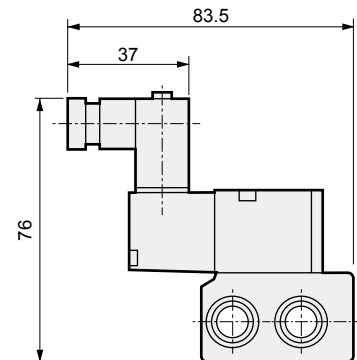
- $\phi 4$, $\phi 6$ push-in fitting: (GS4/GS6)



- Terminal box: (B)

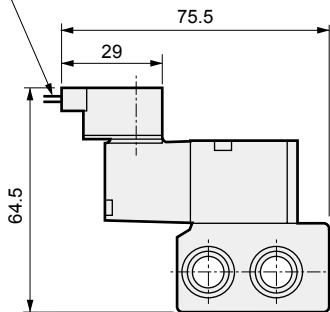


- Terminal box with lamp: (L/LS)



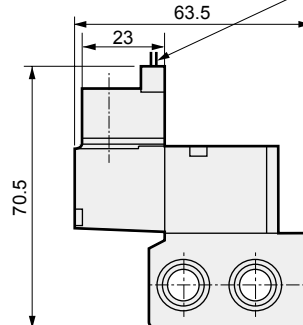
- C type connector: (C/C1/C2/C3)

Lead wire (AWG#24, O.D. $\phi 1.5$)
(C,C0*,C2,C2*)

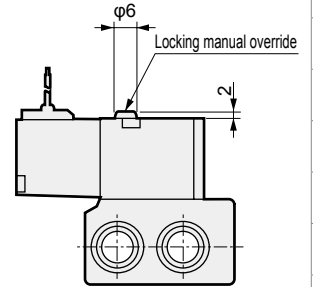


- D type connector: (D/D1/D2/D3)

Lead wire (AWG#24, O.D. $\phi 1.5$)
(D,D0*,D2,D2*)

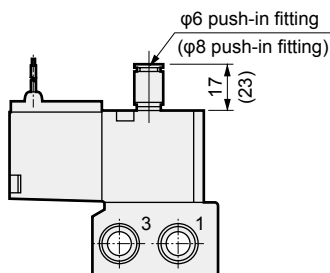


- Locking manual override: (M1)

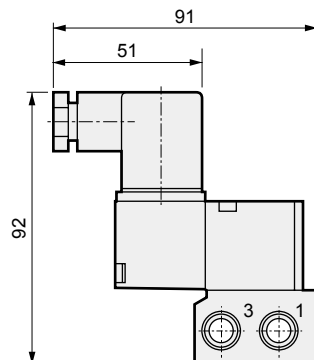


For M3PA2

- $\phi 6$, $\phi 8$ push-in fitting: (GS6/GS8)

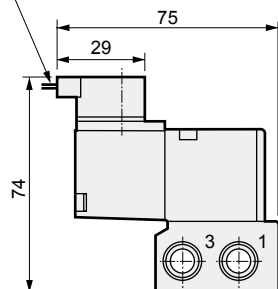


- Terminal box: (B/L/LS)



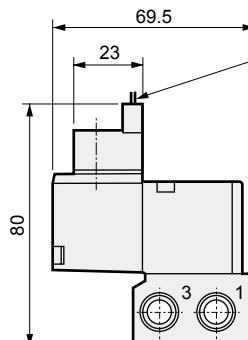
- C type connector: (C/C1/C2/C3)

Lead wire (AWG#24, O.D. $\phi 1.5$)
(C,C0*,C2,C2*)

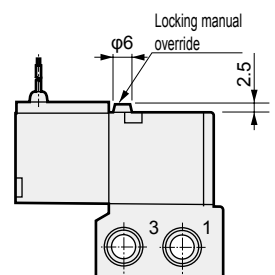


- D type connector: (D/D1/D2/D3)

Lead wire (AWG#24, O.D. $\phi 1.5$)
(D,D0*,D2,D2*)



- Locking manual override: (M1)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

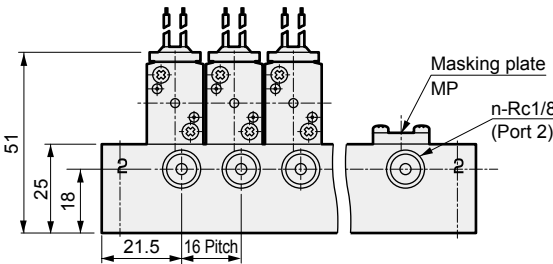
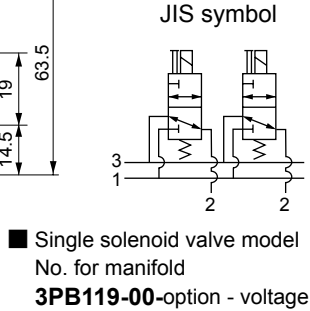
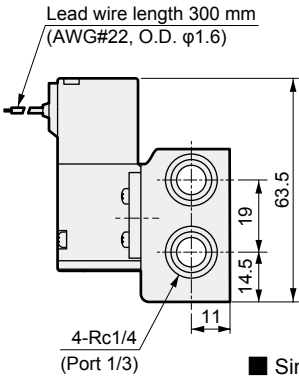
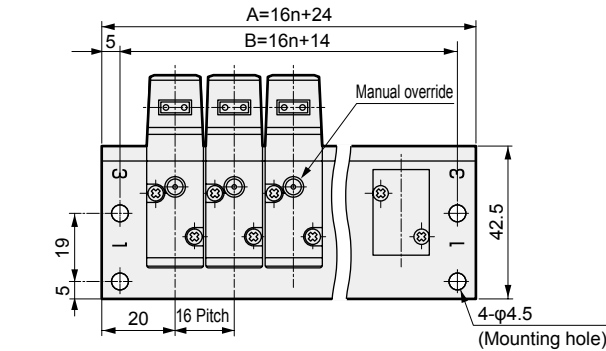
M3PB1 Series

Individual wiring manifold: sub-plate piping

Dimensions 

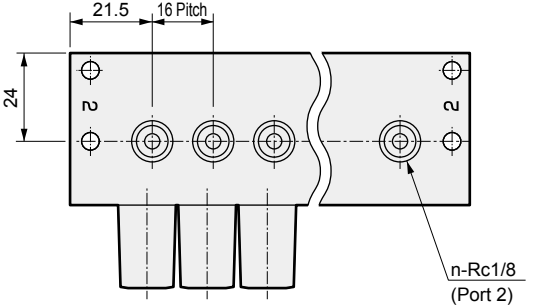
M3PB180-06

● Port 2 - individual piping, port 1/3 - common piping: grommet lead wire



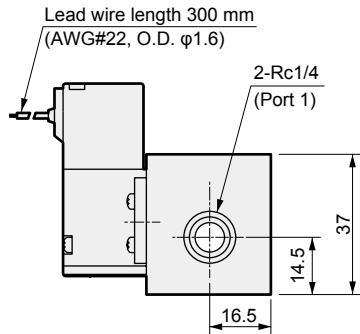
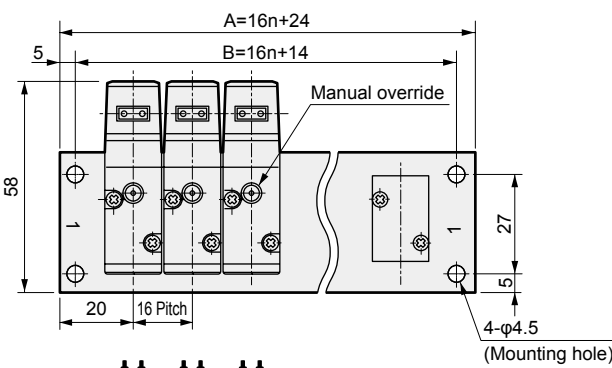
M3PB180-06Y

● Port 2 - rear piping, port 1/3 - common piping

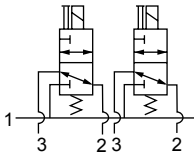


M3PB180-06A

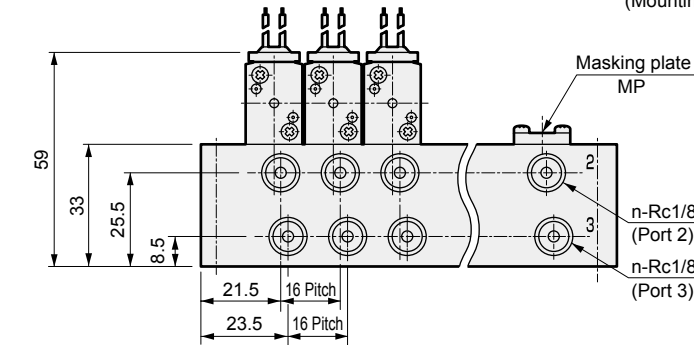
● Port 2/3 - individual piping, port 1 - common piping: grommet lead wire



JIS symbol



■ Single solenoid valve model No. for manifold
3PB119-00- option - voltage

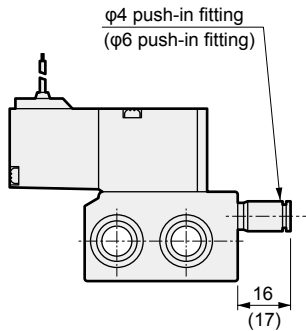


Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328	344
B	46	62	78	94	110	126	142	158	174	190	206	222	238	254	270	286	302	318	334

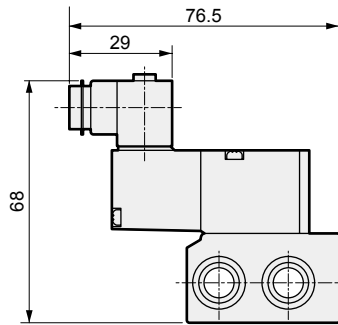
Dimensions

For M3PB1

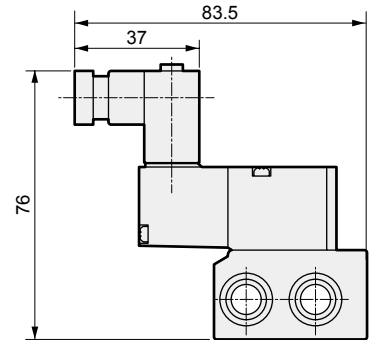
● $\phi 4$, $\phi 6$ push-in fitting: (GS4/GS6)



● Terminal box: (B)

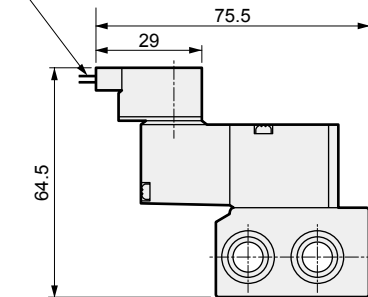


● Terminal box with lamp: (L/LS)

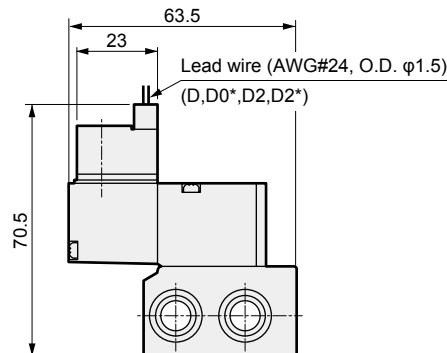


● C type connector: (C/C1/C2/C3)

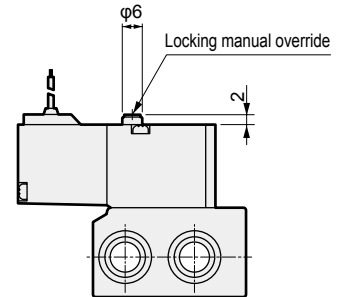
Lead wire (AWG#24, O.D. $\phi 1.5$)
(C,C0*,C2,C2*)



● D type connector: (D/D1/D2/D3)



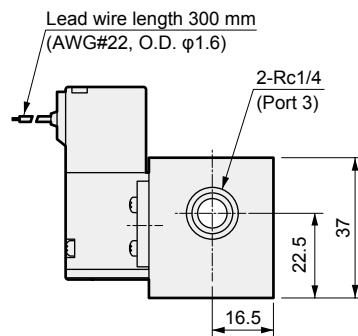
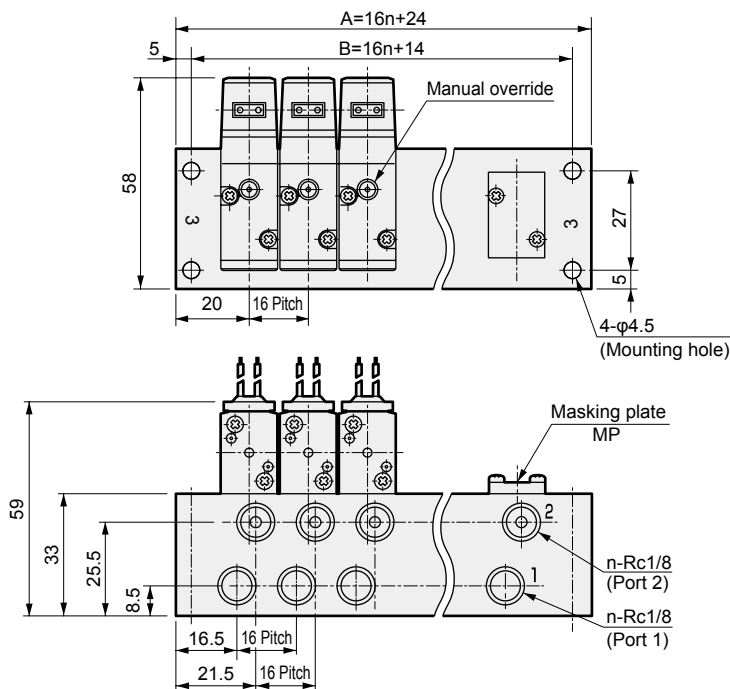
● Locking manual override: (M1)



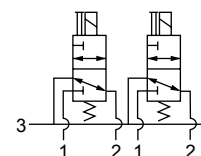
M3PB180-06B



● Port 1/2 - individual piping, port 3 - common piping: grommet lead wire



JIS symbol



■ Model No. of single unit solenoid valve unit for manifold
3PB119-00-option-voltage

Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328	344
B	46	62	78	94	110	126	142	158	174	190	206	222	238	254	270	286	302	318	334

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

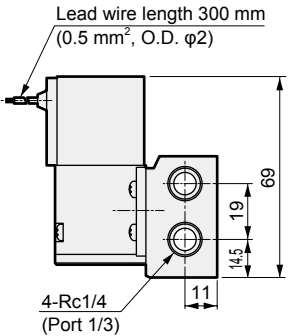
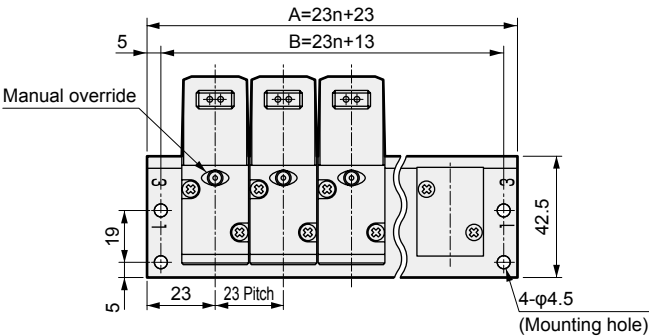
M3PB2 Series

Individual wiring manifold: sub-plate piping

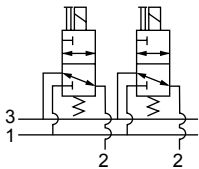
Dimensions 

M3PB280-06

● Port 2 - individual piping, port 1/3 - common piping: grommet lead wire



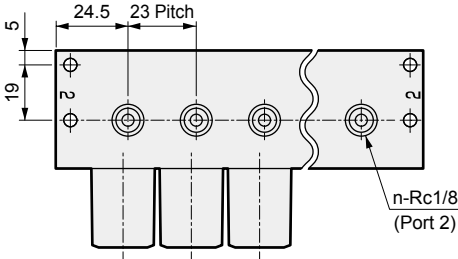
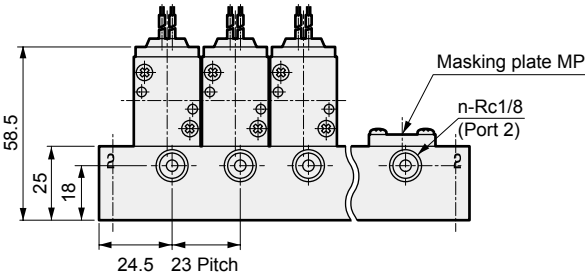
JIS symbol



■ Single solenoid valve model
No. for manifold
3PB219-00- option - voltage

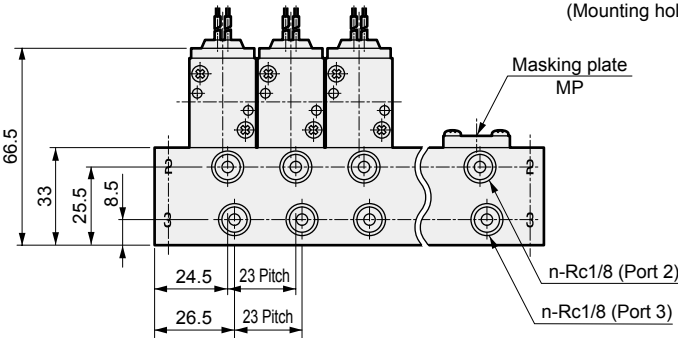
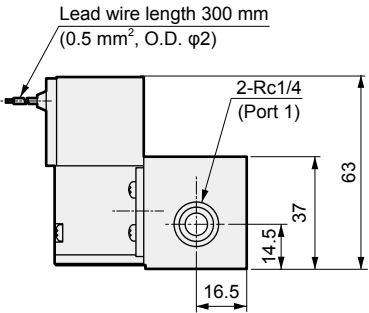
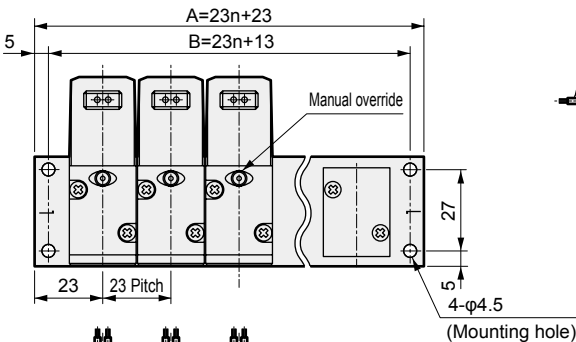
M3PB280-06Y

● Port 2 - rear piping, port 1/3 - common piping

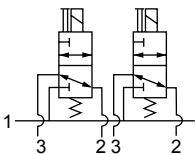


M3PB280-06A

● Port 2/3 - individual piping, port 1 - common piping: grommet lead wire



JIS symbol



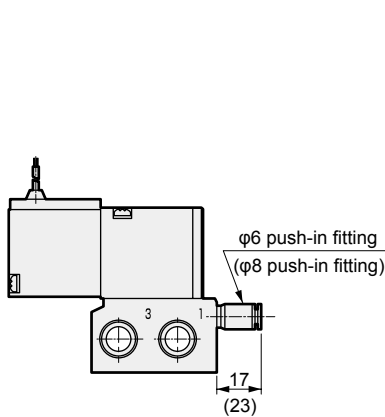
■ Single solenoid valve model No.
for manifold
3PB219-00- option - voltage

Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391	414	437	460	483
B	59	82	105	128	151	174	197	220	243	266	289	312	335	358	381	404	427	450	473

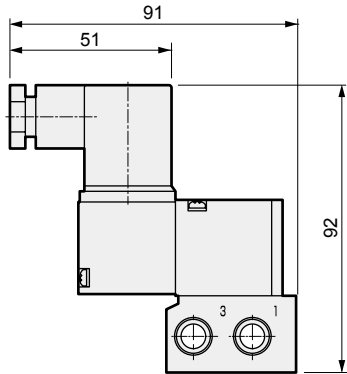
Dimensions

For M3PB2

● $\phi 6$, $\phi 8$ push-in fitting: (GS6/GS8)

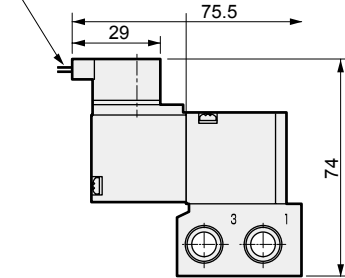


● Terminal box: (B/L/LS)



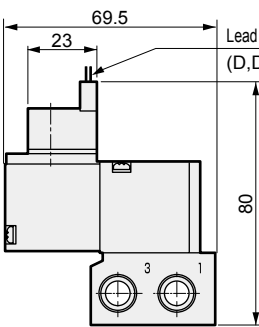
● C type connector: (C/C1/C2/C3)

Lead wire (AWG#24, O.D. $\phi 1.5$)
(C, C0*, C2, C2*)

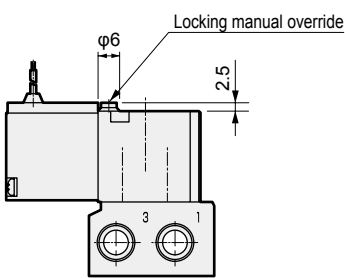


● D type connector: (D/D1/D2/D3)

Lead wire (AWG#24, O.D. $\phi 1.5$)
(D, D0*, D2, D2*)



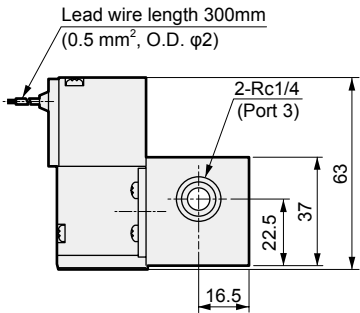
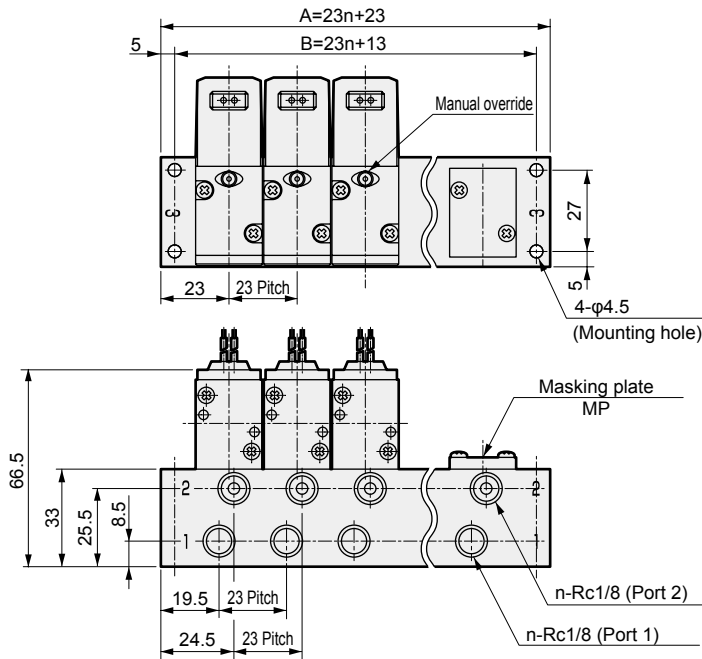
● Locking manual override: (M1)



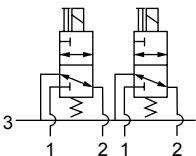
M3PB280-06B



● Port 1/2 - individual piping, port 3 - common piping: grommet lead wire



JIS symbol



■ Single solenoid valve model No.
for manifold
3PB219-00- option - voltage

Station No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391	414	437	460	483
B	59	82	105	128	151	174	197	220	243	266	289	312	335	358	381	404	427	450	473

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending