



Discrete 5 port valve 4TB3/4TB4 Series

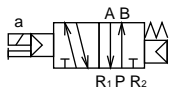
● Applicable cylinder bore size: $\varnothing 63$ to $\varnothing 180$



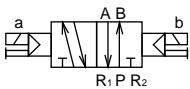
MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B (Master)
W4GA/B2
W4GB4
MN3S0
MN4S0
4TB
4L2-4/LMFO
4SA/B0
4SA/B1
4KA/B
4F
PV5G/CMF
PV5/CMF
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0E
HMV/HSV
2QV/3QV
SKH
PCD/FS/FD
Ending

JIS symbol

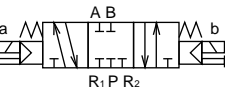
- 5 port valve
2-position single solenoid



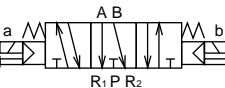
- 2-position double solenoid



- 3-position
All ports closed



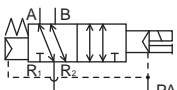
- 3-position A/B/R connection



- 3-position P/A/B connection



- External pilot



PA: 0.2 MPa and over

(Symbol is 2-position single solenoid.)

Common specifications

Descriptions		
Valve and operation type		Pilot operated soft spool valve
Working fluid		Compressed air
Max. working pressure MPa		1.0
Min. working pressure MPa	2-position	0.15 (single), 0.10 (double)
	3-position	0.20
Withstanding pressure MPa		1.50
Ambient temperature °C		5 to 50
Fluid temperature °C		5 to 50
Lubrication		Not required
Protective structure		Dust proof (equivalent to IP65: Option)
Vibration/impact m/s ²		50 or less / 300 or less
Working environment		Containing corrosive gas is impermissible.

Note 1: The working pressure range is 0 to 1.0 MPa when the external pilot (option symbol: K) is selected. Set the external pilot pressure between 0.2 to 1.0 MPa.

Individual specifications

Descriptions		4TB3	4TB4
Max. working pressure MPa		1.0	
Withstanding pressure MPa		1.5	
Port size Note 1	R port	Rc3/8	Rc1/2
	P/A/B port	Rc1/4, Rc3/8	Rc3/8, Rc1/2
	PR port		Rc1/8
	PA port		Rc1/8
Response time	2-position	30 or less	50 or less
Note 2 ms	3-position	50 or less	70 or less

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

Note 2: Response time is the value at an air supply of 0.5 MPa and oil-free. The value will change based on quality of pressure and oil.

Flow characteristics

Model no.	Solenoid position	C(dm ³ /(s·bar))	b	
4TB3	2-position	7.0	0.25	
	3-position	All ports closed	5.9	0.35
		A/B/R connection	4.9	0.38
		P/A/B connection	7.8	0.15
4TB4	2-position	12.4	0.23	
	3-position	All ports closed	11.9	0.30
		A/B/R connection	9.8	0.34
		P/A/B connection	14.6	0.24

Note 1: Effective sectional area S and sonic conductance C are converted as S = 5.0 x C.

Copper and PTFE free

- Free of copper-based and PTFE based materials in flow path

Coolant proof specifications

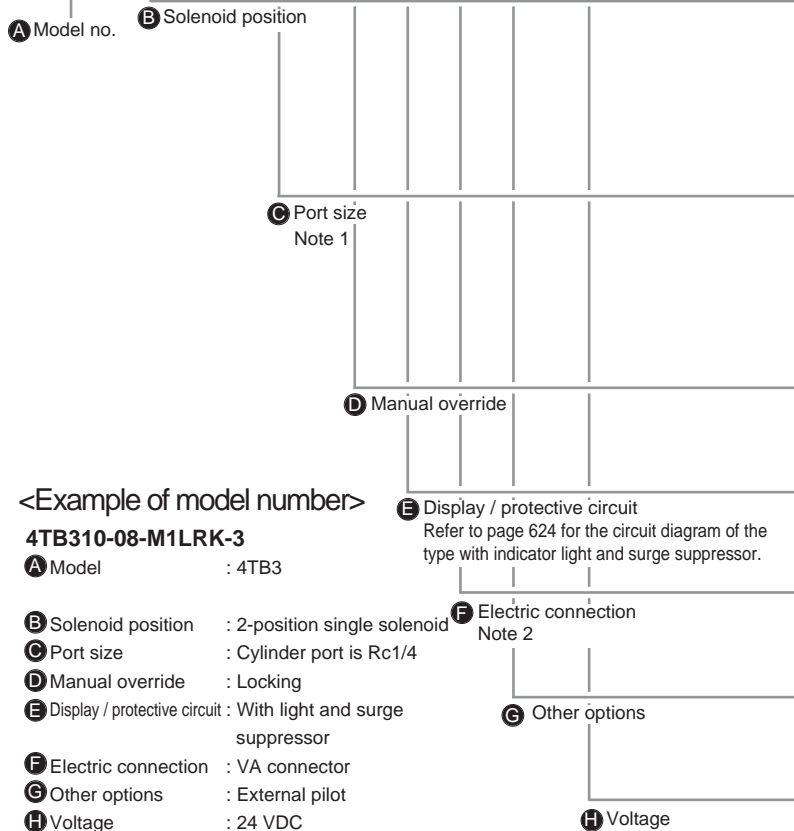
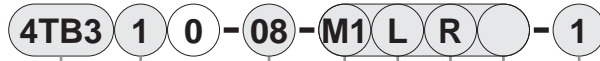
- Special structure with excellent oil resistant and water resistant properties

(AC) ** -Voltage - P6
(DC) Standard specifications

** - A - Voltage

How to order discrete valve

● Sub-plate type



<Example of model number>

4TB310-08-M1LRK-3

- A** Model : 4TB3
- B** Solenoid position : 2-position single solenoid
- C** Port size : Cylinder port is Rc1/4
- D** Manual override : Locking
- E** Display / protective circuit : With light and surge suppressor
- F** Electric connection : VA connector
- G** Other options : External pilot
- H** Voltage : 24 VDC

⚠ Note on model no. selection

Note 1: Port size indicates P/A/B port.
R port is Rc3/8 for 4TB3, Rc1/2 for 4TB4, and PR/PA port is Rc1/8.

Note 2. Electric connection

Shape/terminal arrangement	Terminal thread: M3/M5 Conduit port: PF1/2	
Name	Gland	Note 3 VA connector
Symbol	Blank	R
JIS Symbol		

● Example of VA connector type connection cable

Maker name	Note 5 Model no.
OMRON Note 4	XS2F-D421-C80-A
	XS2F-D421-C81-A
CORRENS Note 4	TM-4DSX1H4
	TM-4DSB1H4
YAMATAKE Note 4	PA5-4ISX2HK
	PA5-4ISB2HK

Note 3: For VA connector type (R), shape of cable side connector differs depending on power source (AC, DC).

Note 4: With the connection cables above, the upper line is the single-end connector and the bottom line is the double-end connector (male, female).

Note 5: The model indicates a typical DC type 4-core model. Contact each maker for details.

		A Model no.		
		4TB3	4TB4	
Symbol	Descriptions			
B Solenoid position				
1	2-position single solenoid	●	●	
2	2-position double solenoid	●	●	
3	3-position all ports closed	●	●	
4	3-position A/B/R connection	●	●	
5	3-position P/A/B connection	●	●	
C Port size				
08	Rc1/4	●		
08Y	Rc1/4 (back porting)	●		
10	Rc3/8	●	●	
10Y	Rc3/8 (back porting)		●	
15	Rc1/2		●	
D Manual override				
Blank	Non-locking	●	●	
M1	Locking	●	●	
E Display / protective circuit				
Blank	Without light/surge suppressor	●	●	
L	With light/surge suppressor	●	●	
F Electric connection				
Blank	Gland	●	●	
R	VA connector (protective structure IP65)	●	●	
G Other options				
Blank	No option	●	●	
K	External pilot	●	●	
H Voltage				
1	Standard	100 VAC (50/60Hz)	●	●
		200 VAC (50/60Hz)	●	●
		24 VDC	●	●
4	Option	12 VDC	●	●
		110 VAC (50 / 60Hz)	●	●
		220 VAC (50 / 60Hz)	●	●

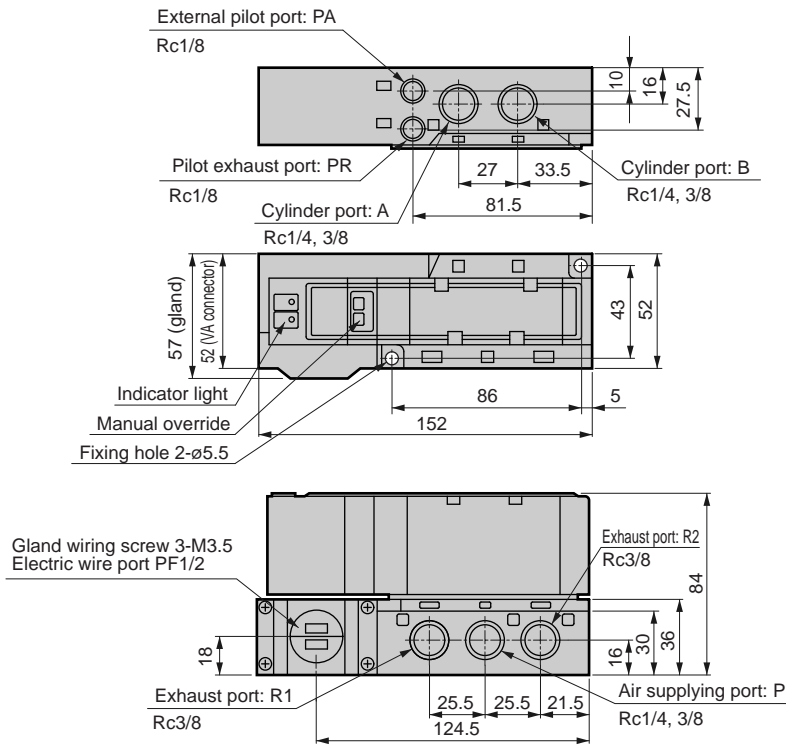
MN3E0
MN4E0
4GA/B
M4GA/B
MN4GA/B
4GA/B (Master)
W4GA/B2
W4GB4
MN3S0
MN4S0
4TB
4L2-4/LMF0
4SA/B0
4SA/B1
4KA/B
4F
PV5G/CMF
PV5/CMF
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD/FS/FD
Ending
Discrete 5 port pilot operated valve

Dimensions

4TB3*0



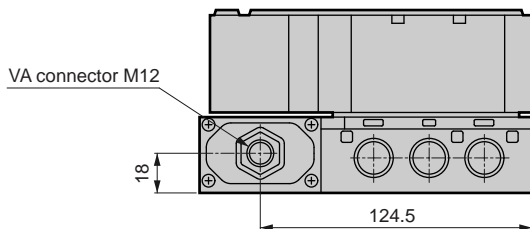
● Gland type



4TB3*0-*-*R

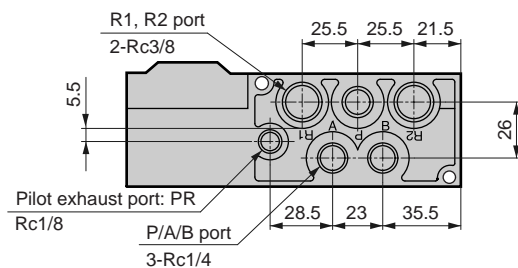


● VA connector type



4TB3*0-08Y

● Back porting type



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

Discrete
5 port pilot operated valve

4TB4 Series

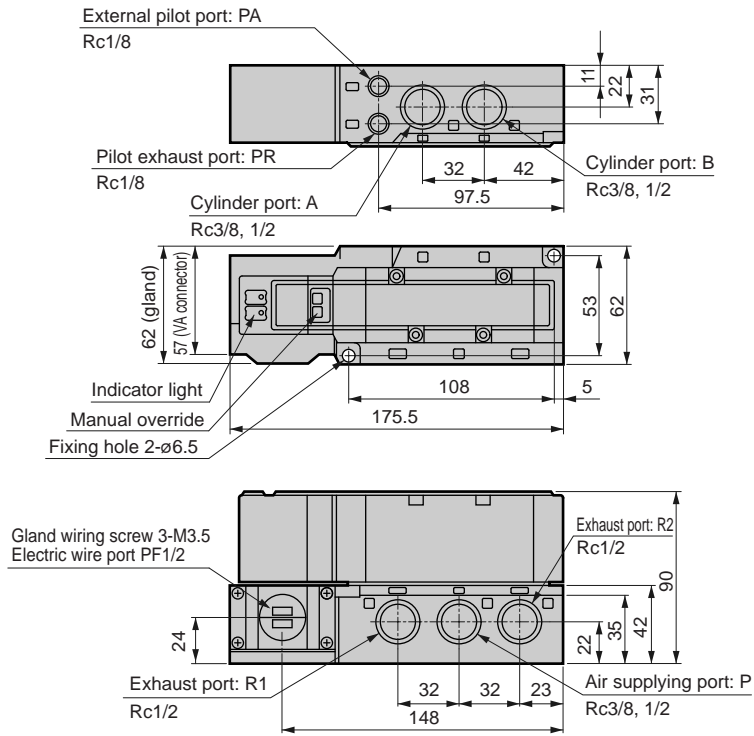
Discrete valve: Sub-plate type

Dimensions

4TB4*0



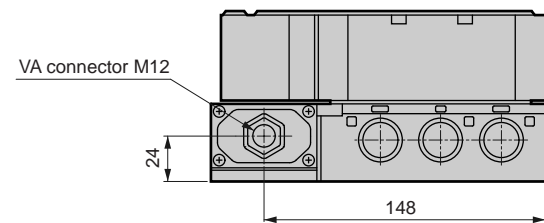
● Gland type



4TB4*0-*-*R

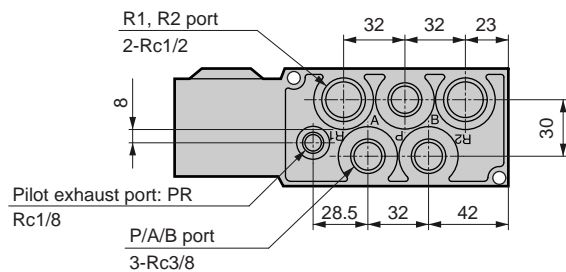


● VA connector type



4TB4*0-08Y

● Back porting type



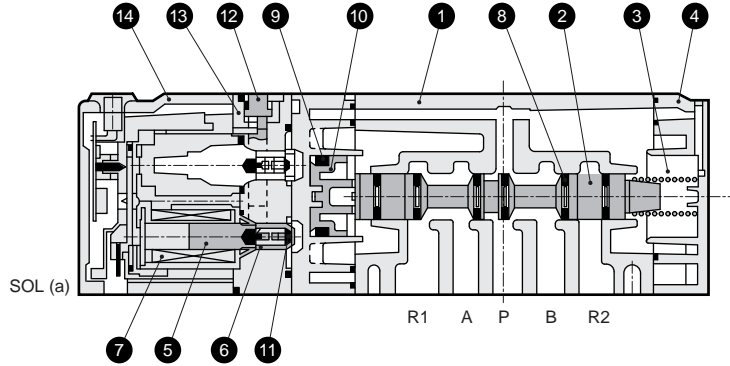
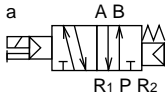
4TB3/4TB4 Series

Discrete valve

Internal structure and parts list

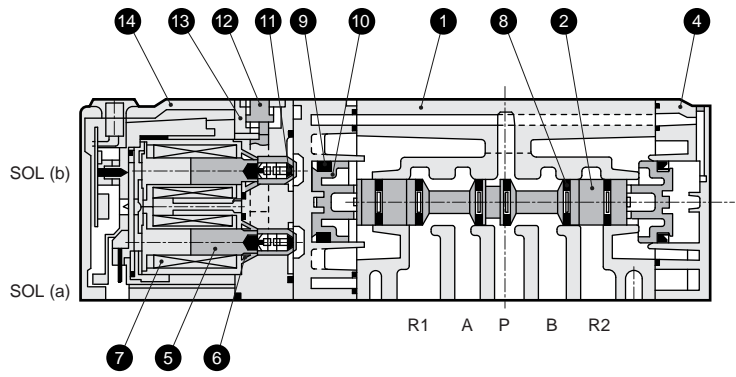
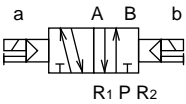
4TB319/4TB419

● 2-position single solenoid



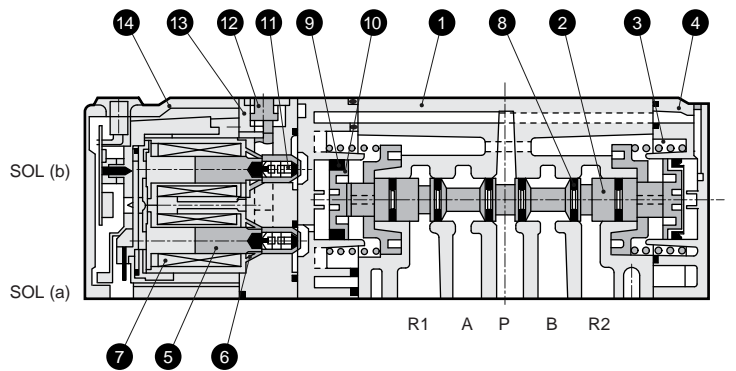
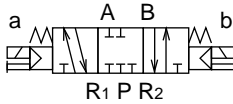
4TB329/4TB429

● 2-position double solenoid



4TB339/4TB439

● 3-position all ports closed



4TB349/4TB449

● 3-position A/B/R connection



4TB359/4TB459

● 3-position P/A/B connection



Main parts list

Repair parts list

No.	Parts name	Material	No. / parts name		2 8 9 10		5 6 7 14			
			Model no.	Spool/piston assembly	Coil assembly					
1	Body	Aluminum alloy die-casting	4TB310	4T9-111	4TB310 - display / protective circuit - COIL - voltage					
2	Valving element (spool)	Aluminum								
3	Valve spring	Stainless steel wire for spring	4TB320	4T9-112	4TB320 - display / protective circuit - COIL - voltage					
4	Cap	Resin								
5	Plunger	-	4TB330	4T9-113	4TB330 - display / protective circuit - COIL - voltage					
6	Plunger spring	-	4TB340	4T9-114	4TB340 - display / protective circuit - COIL - voltage					
7	Coil assembly	-	4TB350	4T9-115	4TB350 - display / protective circuit - COIL - voltage					
8	Spool packing seal	Nitrile rubber	4TB410	4T9-116	4TB410 - display / protective circuit - COIL - voltage					
9	Y type packing seal	Nitrile rubber								
10	Piston	Resin	4TB420	4T9-117	4TB420 - display / protective circuit - COIL - voltage					
11	Valve seat	Nitrile rubber								
12	Manual button	Resin	4TB430	4T9-118	4TB430 - display / protective circuit - COIL - voltage					
13	Pilot operated valve	Resin	4TB440	4T9-119	4TB440 - display / protective circuit - COIL - voltage					
14	Cover	Resin	4TB450	4T9-120	4TB450 - display / protective circuit - COIL - voltage					