

Valve air unit

Overview

In valve air units, the solenoid valve is connected to components such as regulators.

Work such as piping is eliminated, enabling the unit to be used immediately.

Features

(1) Simplified order placement

Units can be purchased using only one form, making order placement and delivery management easy.

(2) Reduced man-hours

FR components and solenoid valves are connected as a module, eliminating work such as piping.

(3) Space saving

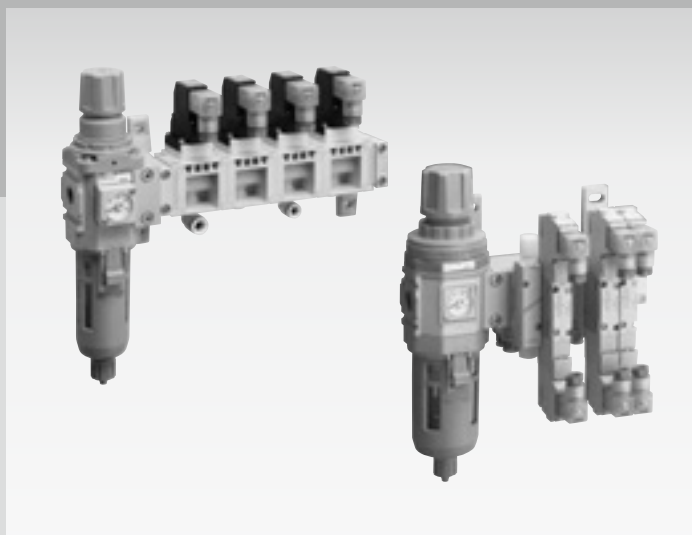
Piping free and fitting free simple design. Compact design that fits into confined spaces.

Descriptions of icons

(1) Model selection is easy.



Complex options are eliminated to allow easier selection even for the first order.

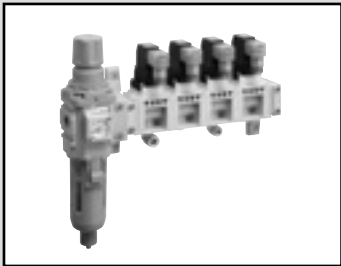


CONTENTS

● Pilot operated 2-port solenoid valve CXU10-GEXA Series	1008
● Pilot operated 5-port valve CXU30-M4G2R Series	1012

Series Variation [Solenoid valves]

Series Model No.	Voltage		Connection port					FR component			Electrical connections		
	24 VDC	100 VAC	Port size (IN)	Port size (OUT)				Regu.	Filter/ regulator		Grommet lead	E type connector	DIN terminal box
			3/8	ø4	ø6	ø8	1/4	R2000	W2000	W3000			
● Pilot operated 2-port solenoid valve CXU10-GEXA Simple manifold 	●	●	●		●	●		●	●		●		●
● Pilot operated 5-port valve CXU30-M4G2R Simple manifold 	●	●	●	●	●	●		●		●		●	●



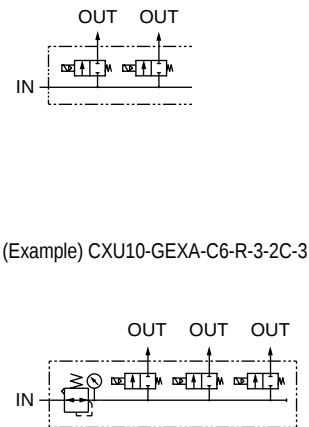
Pilot operated 2-port solenoid valve for compressed air

CXU10-GEXA Series

NC (open when energized)
Order as a manifold with a connected regulator



JIS symbol



Specifications

Item	CXU10-GEXA			
Working fluid	Compressed air			
Working pressure differential MPa	0.01 (≈1.5 psi, 0.1 bar) to 0.7 (≈100 psi, 7 bar)			*3
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)			
Proof pressure MPa	1.05 (≈150 psi, 10.5 bar)			
Fluid temperature °C	5 (41°F) to 55 (131°F)			
Ambient temperature °C	5 (41°F) to 55 (131°F)			
Atmosphere	Place free of corrosive gas/explosive gas and not exposed to water			
Valve structure	Pilot operated diaphragm drive			
Valve section leakage cm³/min(ANR)	10 or less			
Mounting orientation	Unrestricted			
Port size (IN)	IN:Rc3/8			
Connecting wire bore size (OUT)	Push-in fitting ø6	Radial push-in fitting ø6	Push-in fitting ø8	Radial push-in fitting ø8
C[dm³/(s·bar)] *2	1.6		3.0	
b	0.37		0.32	
Electrical specifications				
Rated voltage	100 VAC, 24 VDC			*1
Rated power VA	1.2			
Power consumption W DC	0.6			
Thermal class	B			
Degree of protection (IEC Standard 529)	Lead wire: IPX0, with DIN terminal box: IPX5			

*1: The voltage fluctuation range is ±10%.
 *2: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.
 *3: When using with an extremely small flow rate or when the solenoid valve's secondary side is restricted, set the pressure so that the pressure difference does not fall below 0.01 MPa with the valve opened. (Refer to precautions on pages 1051 to 1055.) Contact CKD if the differential pressure before/after the solenoid valve with the valve opened is small.

Regulator specifications			
Set pressure	MPa	0.05 (≈7.3 psi, 0.5 bar) to 0.7 (≈100 psi, 7 bar)	*4, *5
Pressure relief		With relief mechanism	
Port size		Rc3/8	
Ambient / fluid temperatures	°C	5 (41°F) to 60 (140°F)	
Filter specifications			
Filtration rating	μm	5	
Drain capacity	cm³	12.0	
Port size		Rc3/8	

*4: The set pressure range is limited by the working pressure of CXU10-EXA.
 *5: In the case of "F1" with auto-drain, the min. working pressure of auto-drain is 0.15 MPa.

Weight

Weight		(Unit: kg)
Item	Description	
FR components (including T type brackets and joiners)		
A: Pipe adaptor		0.21
R: Regulator		0.58
RT8: Regulator (without pressure gauge)		0.57
W: Filter/regulator		0.7
WT8: Filter/regulator (without pressure gauge)		0.69
2-port solenoid valve		
CXU10-EXA (discrete valve and joiner)	*6	0.11

*6: Weight of models with the DIN terminal box is +20 g.

The weight is calculated as FR component + 2-port solenoid valve × number of stations.

How to order

CXU10-GEXA-**C6**-**R**-**3**-**2C**-**3**

A Port size (OUT)

B FR component options

C Solenoid valve station No.

D Coil option

E Rated voltage

Code	Description
A Port size (OUT)	
C6	ø6 push-in fitting
CL6	ø6 radial push-in fitting
C8	ø8 push-in fitting
CL8	ø8 radial push-in fitting
B FR component options	
Component options	A Pipe adaptor (Rc3/8)
	R Regulator (R2000-10-W-X2 *2)
	RT8 Regulator (R2000-10-W-T8X2 *2) No pressure gauge (port Rc1/4 left open)
	W Filter regulator (W2000-10-W-F1 *2)
	WT8 Filter regulator (W2000-10-W-F1T8 *2) No pressure gauge (port Rc1/4 left open)
Direction	Blank IN side left
	X IN side right
C Solenoid valve station No.	
1	1 station
to	to
4	4 stations
D Coil option *3, *4	
2C	Standard Lead wire (without surge suppressor)
2H	Option DIN terminal box (Pg7), with lamp (inside terminal box)
2HS	
	DIN terminal box (Pg7), with lamp/ surge suppressor (inside terminal box)
E Rated voltage	
1	100 VAC
3	24 VDC

Coil option	Voltage	
	1	3
2C	●	●
2H	●	
2HS		●

Select from the combinations indicated with ● above.

⚠ Precautions for model No. selection

- *1: The standard filter regulator is the NC auto-drain. Specify "A" unless the component options R, RT8, W, WT8 are selected. Multiple FR component options cannot be selected.
- *2: The model No. for the IN side left (FR component direction option "Blank").
- *3: Refer to the table to the right for the available coil option and voltage combinations.
- *4: Contact CKD for models with M12 connector cables.

Internal structure

Model	Corresponding catalog and page No.
CXU10-EXA	Page 1027
CXU10-TA	Page 1044
CXU10-MA	Page 1045
R2000	Page 136
W2000	Page 90

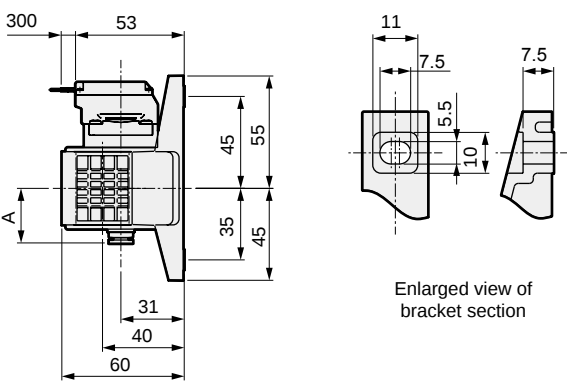
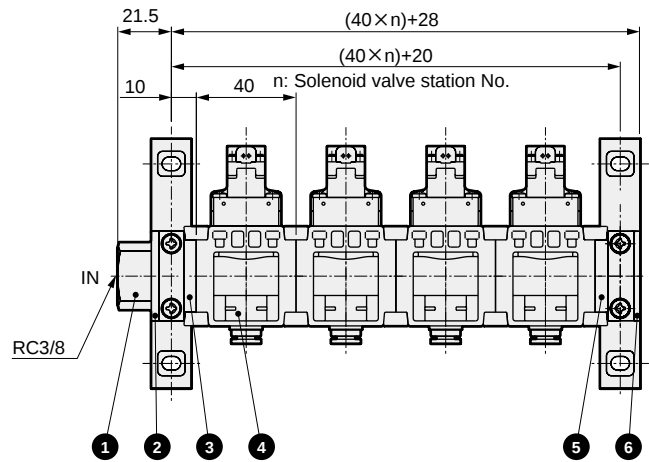
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

CXU10-GEXA Series

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain
Separ
Mech
Press SW
Res press
exh valve
SlowStart
Anti-bac/Bac-
remove Filtr
Film
Resist FR
Oil-ProhR
Med
Press FR
No Cu/
PTFE FRL
Outdrs FRL
Adapter
Joiner
Press
Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneR
AirBoost
Speed Ctrl
Silncr
CheckV/
other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro
Press SW
ContactSW
AirSens
PresSW
Cool
Air Flo
Sens/Ctrl
WaterRtSens
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Gas
generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg
etc
Ending

Dimensions

- Grommet lead wire
- CXU10-GEXA-*-A-*-2C-*
- Cartridge fitting: Straight



Configured product table

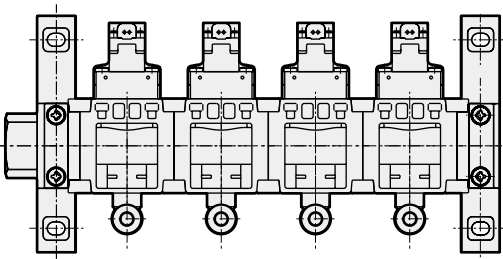
No.	Product name	Model No.
1	Pipe adaptor *1	(FR component option -A)
2	T type bracket	B110-W
3	Turn adaptor	CXU10-TA-00
4	Pilot operated 2-port solenoid valve	CXU10-EXA-□
5	Turn adaptor	CXU10-TA-00
6	Masking adaptor	CXU10-MA-00-B

- *1: Configured products may differ depending on FR component options.
- *2: Mounting directions of brackets and solenoid valves differ from those of the customized units.

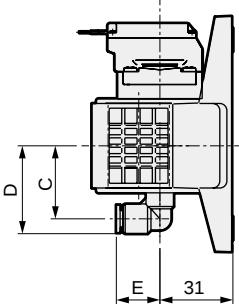
Optional dimensions table

Option	A	B	C	D	E
C6	27	Push-in fitting ø6	-	-	-
CL6	-	Push-in fitting ø6	31	37	18.5
C8	27	Push-in fitting ø8	-	-	-
CL8	-	Push-in fitting ø8	32	39	21

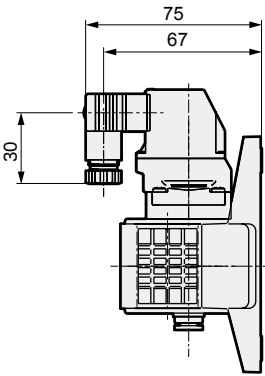
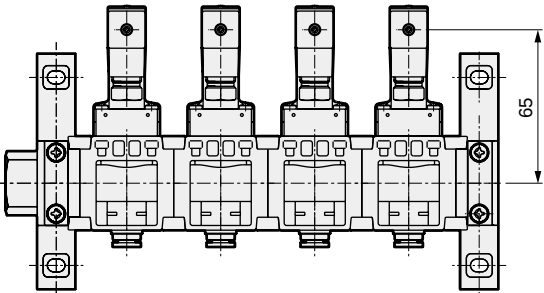
Cartridge fitting: Elbow



n: Solenoid valve station No.

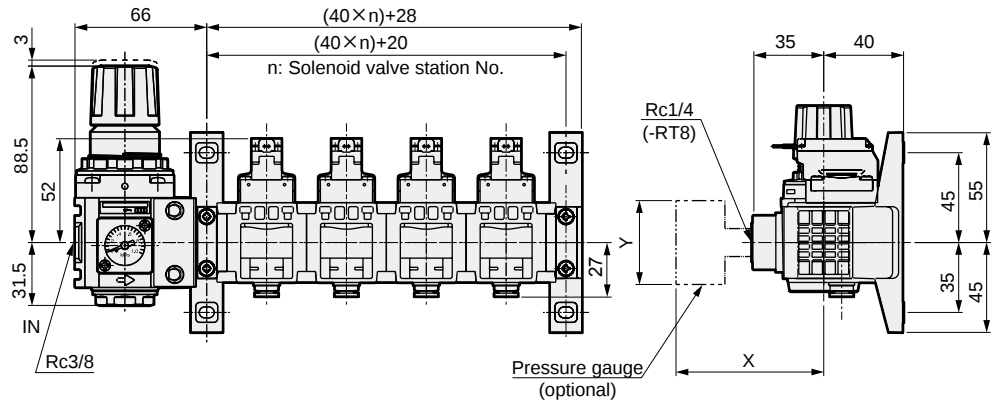


- With DIN terminal box (Pg7)
- CXU10-GEXA-*-A-*-2HS-*



Dimensions

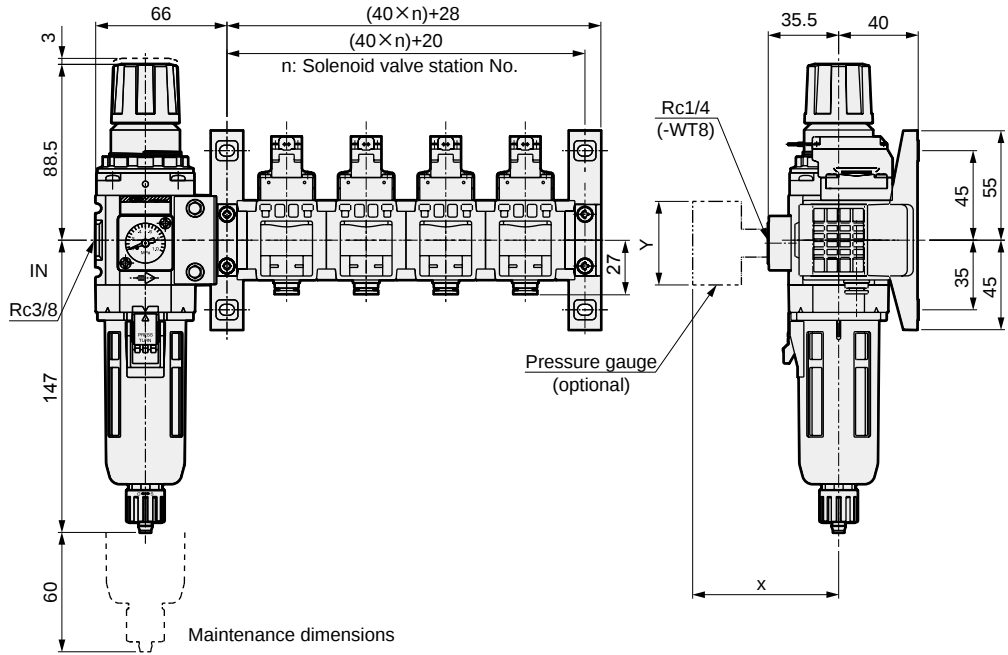
- FR component option: Regulator
CXU10-GEXA-*^R_{RT8} -*-*



Pressure gauge dimensions table

Pressure gauge (optional)	X	Y
G45D	(73.5)	ø39
G49D	(73)	ø43.5
G59D	(75.5)	ø52
G40D	(75)	ø42.5
G50D	(75)	ø52.5
G41D	(73.5)	ø42
G52D	(85.5)	ø52.5

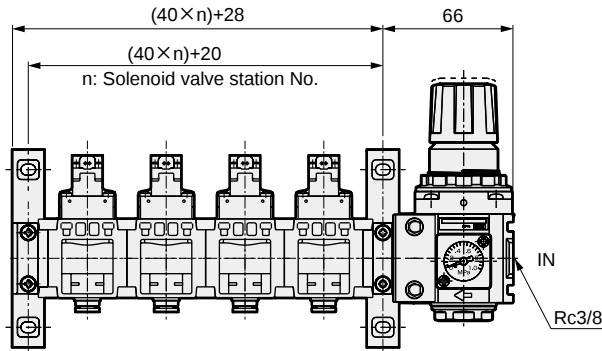
- FR component option: Filter regulator
CXU10-GEXA-*^W_{WT8} -*-*



Pressure gauge dimensions table

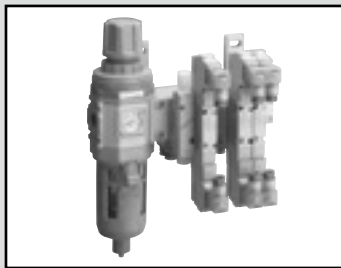
Pressure gauge (optional)	X	Y
G45D	(73.5)	ø39
G49D	(73)	ø43.5
G40D	(75)	ø42.5
G41D	(73.5)	ø42
G52D	(85.5)	ø52.5

- FR component option: Reverse flow
CXU10-GEXA-*^R_{RT8} X-*-*



Note: When the reverse flow option X is selected, the IN side and FR component are on the right.
The figure on the left is for the regulator.

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain
Separ
Mech
Press SW
Res press
exh valve
SlowStart
Anti-bac/Bac-
remove Filtr
Film
Resist FR
Oil-Prohr
Med
Press FR
No Cu/
PTFE FRL
Outdrs FRL
Adapter
Joiner
Press
Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneur
AirBoost
Speed Ctrl
Silncr
CheckV/
other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro
Press SW
ContactSW
AirSens
PresSW
Cool
Air Flo
Sens/Ctrl
WaterRtSens
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Gas
generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg
etc
Ending



Pilot operated 5-port valve

CXU30-M4G2R Series

Order as a manifold with a connected regulator



Common specifications

Item	Description
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)
Min. working pressure MPa	0.2 (≈29 psi, 2 bar) (2-position, 3-position)
Proof pressure MPa	1.05 (≈150 psi, 10.5 bar)
Fluid temperature °C	5 (41°F) to 55 (131°F)
Ambient temperature °C	5 (41°F) to 55 (131°F)
Atmosphere	Place free of corrosive gas and explosive gas Not exposed to water
Port size	Port A/B Push-in fitting ø4, ø6, ø8 R1/R2 port Rc1/4
Manual operating device	Non-locking/locking common
Pilot exhaust method	Main valve/pilot valve common exhaust
Lubrication *1	Not required
Degree of protection *2	Dust-proof
Vibration/shock resistance m/s ²	50 or less/300 or less

*1: Use turbine oil Class 1 ISO VG32 for lubrication.

Excessive or intermittent lubrication results in unstable operation.

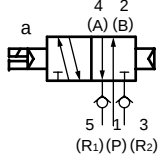
*2: Avoid water drops or oil, etc., during use.

IP65 (jet-proof) applies for DIN terminal box specifications.

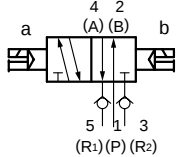
However, the specified outer diameter of the applicable cord and tightening torque must be used for fixing in place.

JIS symbol

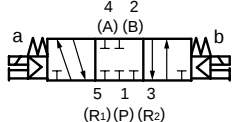
2-position single



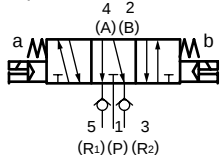
2-position double



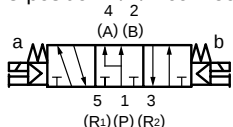
3-position all ports closed



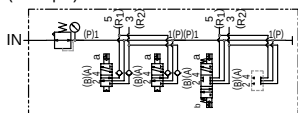
3-position A/R/B connection



3-position P/A/B connection



(Example) CXU30-M4G2R-1130-C6-R-B-3



Electrical specifications

Item	Description
Rated voltage	DC 24 V AC 100
Rated voltage fluctuation range	±10%
Holding current	24 VDC 0.017 A 100 VAC 0.009
Power consumption W	24 VDC 0.4
Apparent power VA	100 VAC 0.98
Thermal class	B
Surge suppressor	Standard
Indicator	With indicator lamp (standard)

Weight

(Unit: kg)

Item	Description
FR components (including T type brackets and joiners)	
A: Pipe adaptor	0.54
R: Regulator	0.80
RT8: Regulator (without pressure gauge)	0.79
W: Filter/regulator	1.06
WT8: Filter/regulator (without pressure gauge)	1.05
5-port valve: Switching position	Single valve Valve sub-base
Without solenoid valve: Masking plate	0.02
2-position Single E type connector	0.08
DIN terminal	0.10
2-position Double E type connector	0.10
DIN terminal	0.14
3-position All ports closed E type connector	0.11
DIN terminal	0.15

The weight is calculated as FR component used + solenoid valve (1) to (4) + valve sub-base.

Flow characteristics

Solenoid position	P→A/B		A/B→R1/R2	
	C[dm ³ /(s·bar)]	b	C[dm ³ /(s·bar)]	b
2-position	2.3	0.29	1.8	0.24
3-position	All ports closed	2.1	0.27	0.27
	A/B/R connection	2.1	0.34	0.2
	P/A/B connection	2.2	0.34	0.29

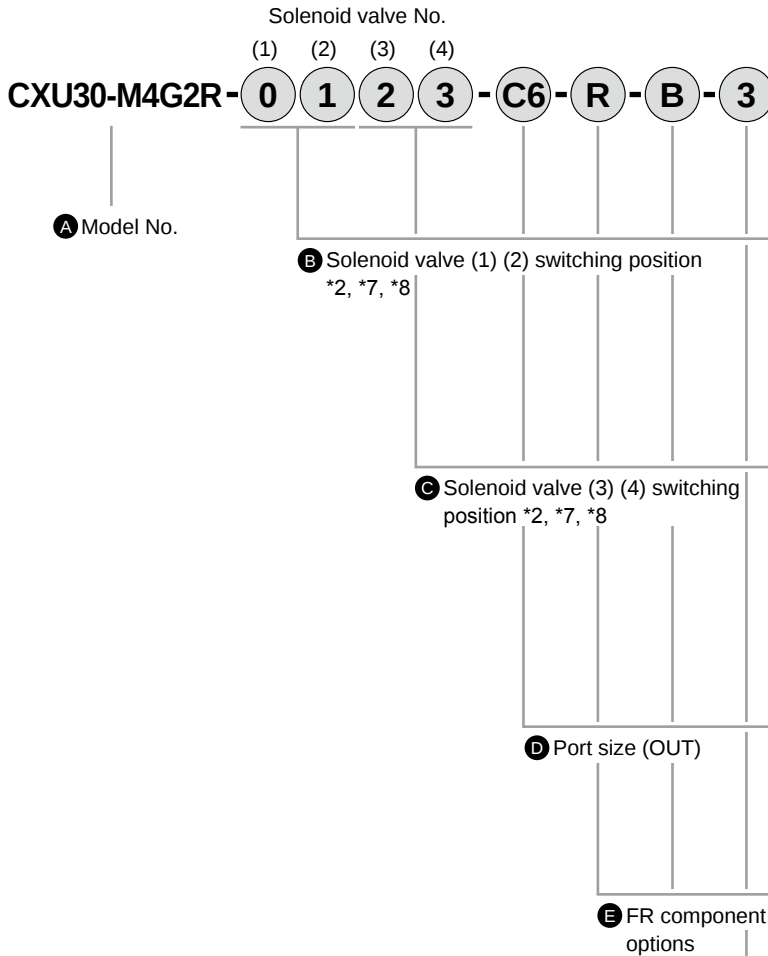
*1: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

*2: Values for 2-position and A/B/R connection are the values when an exhaust check valve is integrated.

Regulator specifications	
Set pressure MPa	0.2 to 0.7 *3
Pressure relief	With relief mechanism
Port size	Rc3/8
Filter specifications	
Filtration rating μm	5
Drain capacity cm ³	45
Port size	Rc3/8

*3: The set pressure range is limited by the working pressure of CXU30-4G2R.

How to order



⚠ Precautions for model No. selection

- *1: The fitting that can be mounted on the R1 port is GWS□-8-S.
- *2: The exhaust check valve is provided as standard. 3-position all ports closed and P/A/B connection are not provided with the exhaust check valve. For the exhaust check valve, refer to page 1057.
- *3: If the port size, electrical connection, or voltage differs for each solenoid valve, it is processed as a customized product.
- *4: The standard filter regulator is the NO auto-drain. Multiple FR component options cannot be selected.
- *5: The model No. for the IN side left (FR component direction option "Blank").
- *6: Two silencers (SLW-8S) are attached to one sub-base.
- *7: Refer to dimensions for positions of solenoid valves (1) and (4).
- *8: When masking plates are used for all solenoid valves, electrical connections and rated voltage options are blank.

Code	Description
B Solenoid valve (1), solenoid valve (2) switching position	
0	Without solenoid valve: Masking plate
1	2-position single; with exhaust check valve
2	2-position double; with exhaust check valve
3	3-position all ports closed
4	3-position ABR connection; with exhaust check valve
5	3-position PAB connection
C Solenoid valve (3), solenoid valve (4) switching position	
Blank	Without sub-base
0	Without solenoid valve; Masking plate
1	2-position single; with exhaust check valve
2	2-position double; with exhaust check valve
3	3-position all ports closed
4	3-position A/B/R connection; with exhaust check valve
5	3-position P/A/B connection
D Port size (OUT)	
C4	ø4 push-in fitting
C6	ø6 push-in fitting
CL6	ø6 radial push-in fitting (facing rear)
C8	ø8 push-in fitting
E FR component options	
Component options	A Pipe adaptor (Rc3/8)
	R Regulator (R2000-10-W-X2 *5)
	RT8 Regulator (R2000-10-W-T8X2 *5) No pressure gauge (port Rc1/4 left open)
	W Filter regulator (W3000-10-W-F *5)
	WT8 Filter regulator (W3000-10-W-FT8 *5) No pressure gauge (port Rc1/4 left open)
Direction	Blank IN side left
	X IN side right
F Electrical connections	
B	DIN terminal box (Pg7) with surge suppressor and indicator lamp
E20	E type connector Lead wire (500 mm) with surge suppressor/lamp
G Rated voltage	
1	100 VAC (rectifier integrated)
3	24 VDC

Internal structure

Model	Corresponding catalog and page No.
CXU30-4G2R	Page 1036
CXU10-MA	Page 1001
CXU13-CA	Page 1046
R2000	Page 136
W3000	Page 90

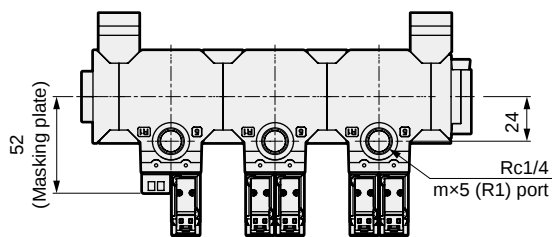
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

CXU30-M4G2R Series

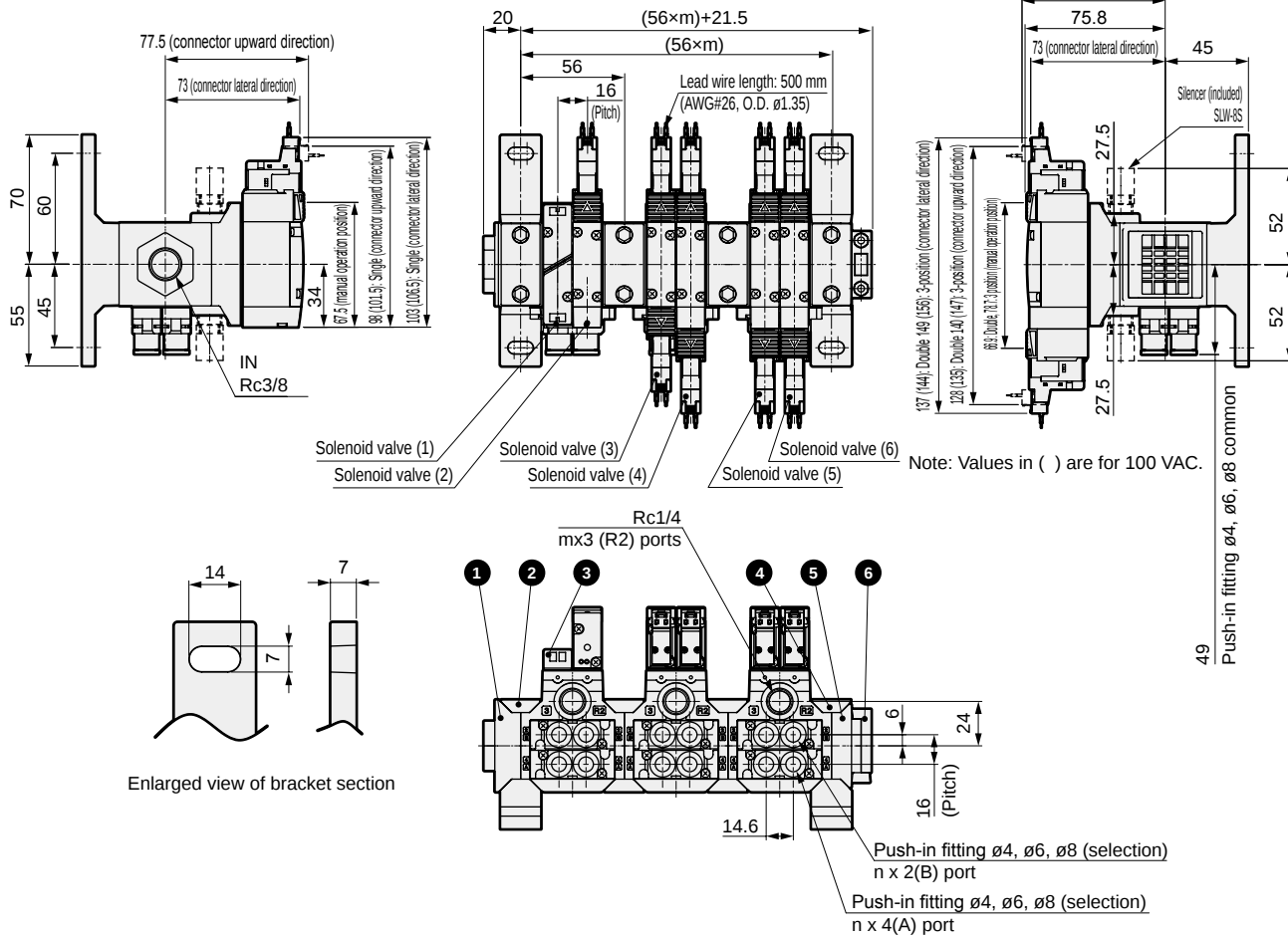
F.R.L. Dimensions

F.R.	CXU30-M4G2R -A
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- F (Filtr) ● E type connector
Cartridge fitting: Straight



n: Number of solenoid valves
m: Number of module sub-bases



Configured product table

No.	Product name	Model No.
1	Pipe adaptor *1	(FR component option -A)
2	T type bracket	B310-W
3	Pilot operated 5-port valve	CXU30-4G2R-□
4	T type bracket	B310-W
5	Module conversion adaptor	CXU13-CA-00
6	Masking adaptor	CXU10-MA-00

*1: Configured products may differ depending on FR component options.

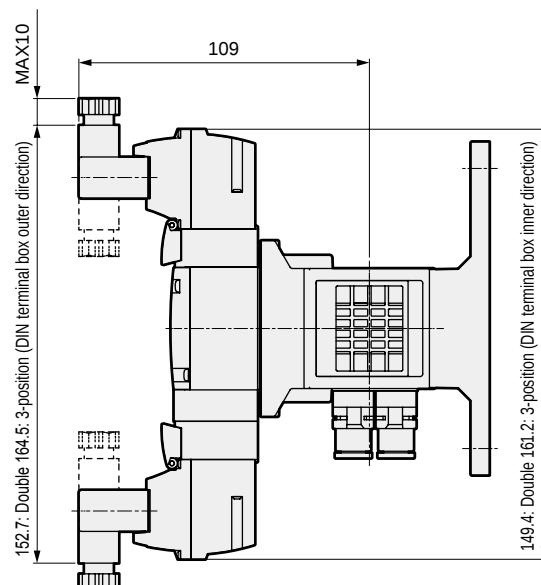
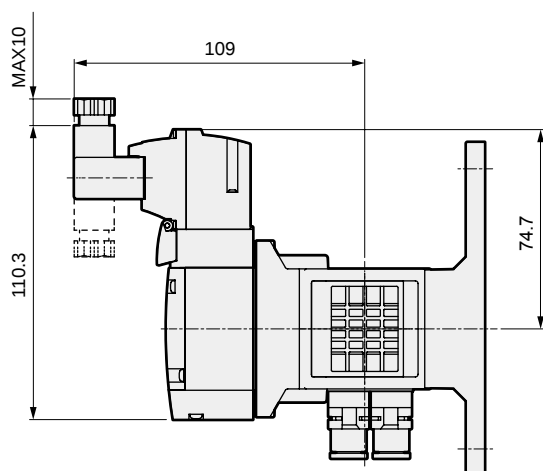
Solenoid valve and module sub-base quantity

Model No.	No. of solenoid valves	Module sub-base quantity
CXU30-M4G2R-(1)(2)	2	1
CXU30-M4G2R-(1)(2)(3)(4)	4	2

Note: The masking plate quantity is included in the solenoid valve quantity.
There are two solenoid valves for each module sub-base.

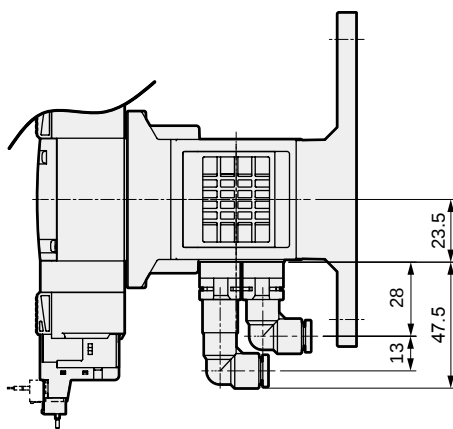
● DIN terminal box (B)
Cartridge fitting: Straight
2-position single

3-position, double

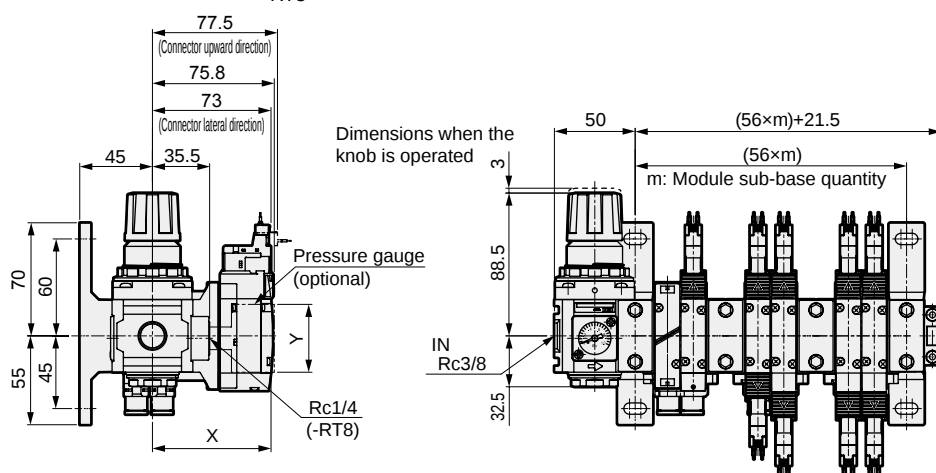


Note: DIN terminal box assembly
is shipped facing inward.

- ø6 radial push-in fitting (facing rear)



- FR component option: Regulator
CXU30-M4G2R-**-*-^R_{RT8}-**-*



Pressure gauge dimensions table

Pressure gauge (optional)	X	Y
G49D	(73)	ø43.5
G59D	(75.5)	ø52
G40D	(75)	ø42.5
G50D	(75)	ø52.5
G41D	(73.5)	ø42
G52D	(78.5)	ø52.5

For the pressure gauge model No.,
refer to catalog No.CB-024SA.

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac- remove Filt
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneur
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompr
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRTSens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

F.R.L.	F (Filter)
F.R.	R (Reg)
	L (Lub)
Drain	
Separ	
Mech	
Press SW	
Res press	
exh valve	
SlowStart	
Anti-back/Bac-	
remove Filtr	
Film	
Resist FR	
Oil-ProHFR	
Med	
Press FR	
No Cu/	
PTFE FRL	
Outdr FRL	
Adapter	
Joiner	
Press	
Gauge	
CompFRL	
LgFRL	
PrecsR	
VacF/R	
Clean FR	
ElecPneU	
AirBoost	
Speed Ctr	
Silncr	
CheckV/	
other	
Fit/Tube	
Nozzle	
Air Unit	
PrecsComp	
Electro	
Press SW	
ContactSW	
AirSens	
Pres SW	
Cool	
Air Flo	
Sens/Ctr	
WaterRiSens	
ToiAir	
(Total Air)	
ToiAirSys	
(Gamma)	
Gas	
generator	
RefrDry	
DesicDry	
HiPolymDry	
MainFiltr	
Dischrg	
etc	
Ending	