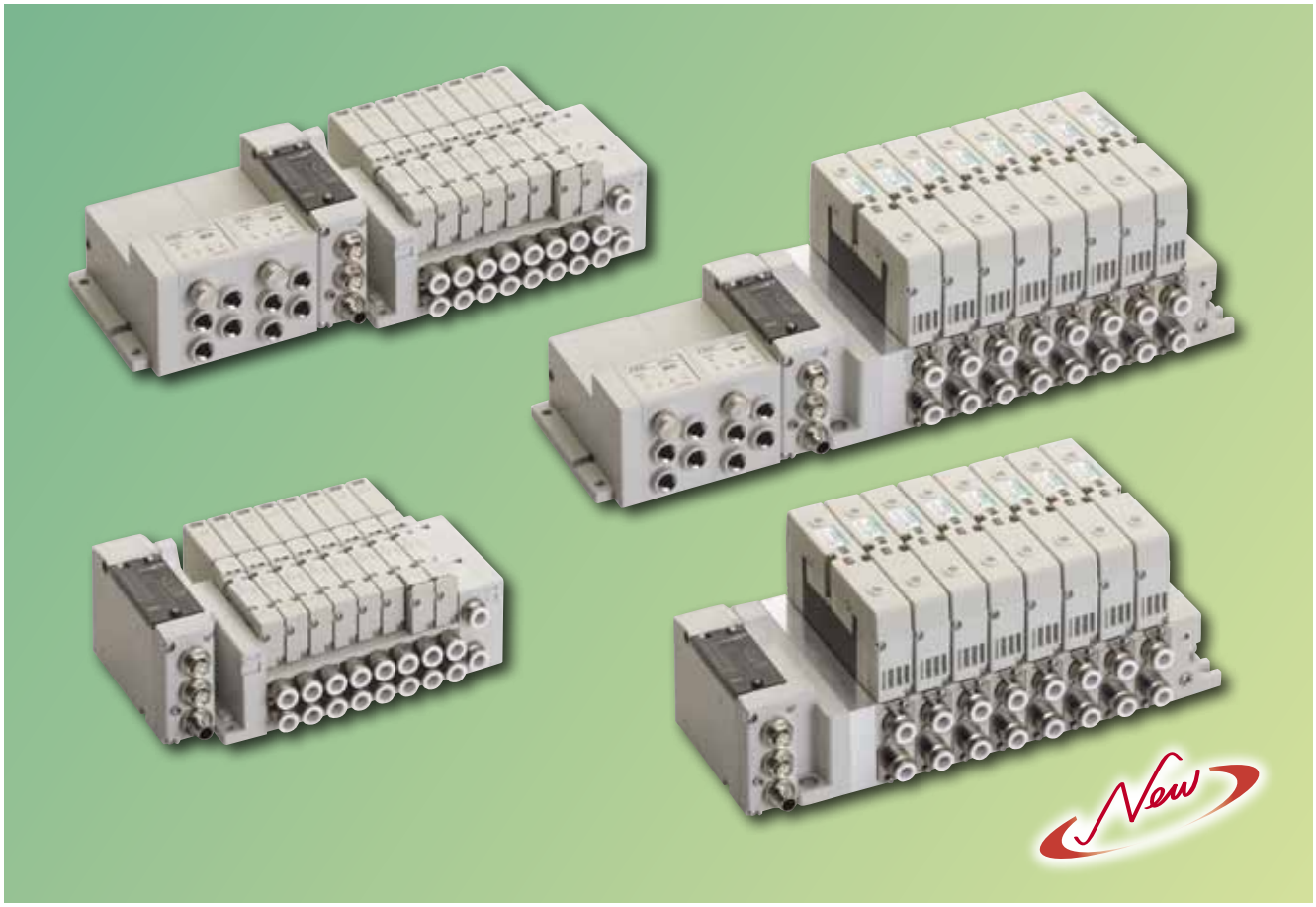
CKD

New Products

EtherNet/IP compatible serial transmission slave unit W4G-T7 Series



EtherNet/IP Compatible Slave Unit Added to the Series

Overview

Compatibility with worldwide EtherNet/IP communication contributes to reduced wiring valves and fewer wiring steps.

RoHS CE

Features

- Select from 32 point output / 16 point output / 16 point input or 16 point output, and PNP/NPN.
- A compact design saves on installation space.
- IP65 construction.

(Compatibility)

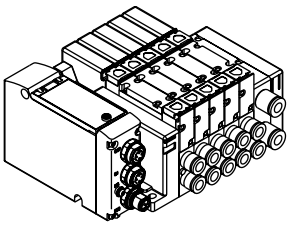
MW3/4GA2, MW4GB2, MW4GZ2
MW4GB4, MW4GZ4

⚠ Always read the precautions described in "Pneumatic Valves" (Catalog No. CB-023SA) before use.

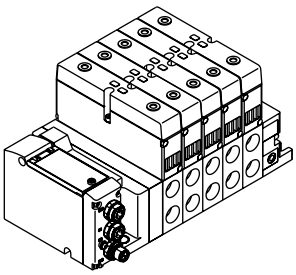
CKD Corporation
CC-1329A

Specifications

W4G2
(Without I/O block)



W4G4
(Without I/O block)

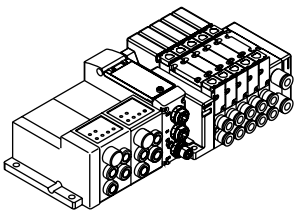


● Slave unit dedicated for valves (without I/O block)

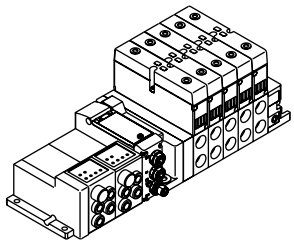
Descriptions		T7EN1	T7EN2 *1	T7ENP1	T7ENP2 *1
Network name		EtherNet/IP			
Power supply Voltage	Unit side	24 VDC ±10%			
	Valve side	24 VDC +10%, -5%			
Consumption Current	Unit side	130 mA or less			
	Valve side	15 mA or less (excluding load current)			
Valve output type		NPN Output		PNP Output	
No. of I/O points		16 point output	32 point output	16 point output	32 point output
LED Display	Power supply	2 positions: Unit power supply and valve power supply			
	Communication	4 positions: MS, NS, L/A IN, and L/A OUT			
Degree of protection		IP65			

*1: When connecting to the W4G4 valve, 32 point output is not available.

W4G2
(With I/O block)



W4G4
(With I/O block)



● Slave unit with I/O block

Descriptions		T7ENB7	T7ENPB7
Network name		EtherNet/IP	
Power supply Voltage	Unit side	24 VDC ±10%	
	Valve side	24 VDC +10%, -5%	
Consumption Current	Unit side	130 mA or less (*2: excluding input block current)	
	Valve side	15 mA or less (excluding load current)	
Valve output		NPN Output	PNP Output
No. of I/O points		16 point input/16 point output	16 point input/16 point output
LED Display	Power supply	2 positions: Unit power supply and valve power supply	
	Communication	4 positions: MS, NS, L/A IN, and L/A OUT	
Degree of protection		IP65	

*2: If the feed power supply of the input blocks also serves as the unit power supply, refer to "Pneumatic Valves" (No. CB-023SA).

* When ordering the slave unit only, MW4GB4 and MW4GZ4 Series are supported. Contact CKD for the order model No.

Compatibility

MW3/4GA2, MW4GB2, MW4GZ2
MW4GB4, MW4GZ4

Individual specifications

● MW4G*2

Descriptions		T7EN*1	T7EN*2	T7EN*7
Max. station No.	Standard wiring	16	18	16
	Double wiring	8	16	8
Max. number of solenoids		16	32	16
I/O block max. number of inputs (input/output)		-	-	(16/8)

● MW4G*4

Descriptions		T7EN*1	T7EN*7
Max. station No.	Standard wiring	16	16
	Double wiring	8	8
Max. number of solenoids		16	16
I/O block max. number of inputs (input/output)		-	(16/8)

How to order

● MW4G*2 Manifold model No. (example)

*1 *2

MW4GA2 1 0 - C8 - T7ENB7 W Y20 - 6 - 3

- A Model No.
- B Solenoid position
- C Port size
- D Serial transmission
- E Terminal box/connector pin array method
- F Option
- G Mount
- H Station No.
- I Voltage

[Example of model No.]

- A Model No. : 5-port valve/body piping
- B Solenoid position : 2-position single
- C Port size : φ 8 push-in fitting
- D Serial transmission: Slim drip-proof type with I/O, EtherNet/IP 16/16 point I/O (NPN valve output)
- E Terminal box/connector pin array method: Double wiring
- F Option : 2 input blocks
  * Y01 to Y04 cannot be selected.
- G Mount : Direct mount
- H Station No. : 6 stations
- I Voltage : 24 VDC

Code	Content
D Serial transmission slave station (lamp and surge suppressor provided as standard)	
T7EN1	Thin drip-proof EtherNet/IP 16 point output (NPN valve output)
T7ENP1	Thin drip-proof EtherNet/IP 16 point output (PNP valve output)
T7EN2	Thin drip-proof EtherNet/IP 32 point output (NPN valve output)
T7ENP2	Thin drip-proof EtherNet/IP 32 point output (PNP valve output)
T7ENB7	Thin with I/O type drip-proof EtherNet/IP 16 point input/16 point output (NPN valve output)
T7ENPB7	Thin with I/O type drip-proof EtherNet/IP 16 point input/16 point output (PNP valve output)

*1: Serial transmission slave unit + I/O block
This is a side piping type.
*2: This is not a DIN rail mount.

● MW4G*4 Manifold model No. (example)

*3

MW4GB4 8 0 - 10 - T7ENP1 W M - 6 - 3

- A Model No.
- B Solenoid position
- C Port size
- D Serial transmission
- E Terminal box/connector pin array method
- F Option
- G Station No.
- H Voltage

[Example of model No.]

- A Model No. : 5-port valve/base side piping
- B Solenoid position : Mix manifold
- C Port size : Rc3/8
- D Serial transmission: Thin drip-proof EtherNet/IP 16 point output (PNP valve output)
- E Terminal box/connector pin array method: Double wiring
- F Option : Non-locking manual override
- G Station No. : 6 stations
- H Voltage : 24 VDC

Code	Content
D Serial transmission slave station (lamp and surge suppressor provided as standard)	
T7EN1	Thin drip-proof EtherNet/IP 16 point output (NPN valve output)
T7ENP1	Thin drip-proof EtherNet/IP 16 point output (PNP valve output)
T7ENB7	Thin with I/O drip-proof EtherNet/IP 16 point input/16 point output (NPN valve output)
T7ENPB7	Thin with I/O drip-proof EtherNet/IP 16 point input/16 point output (PNP valve output)

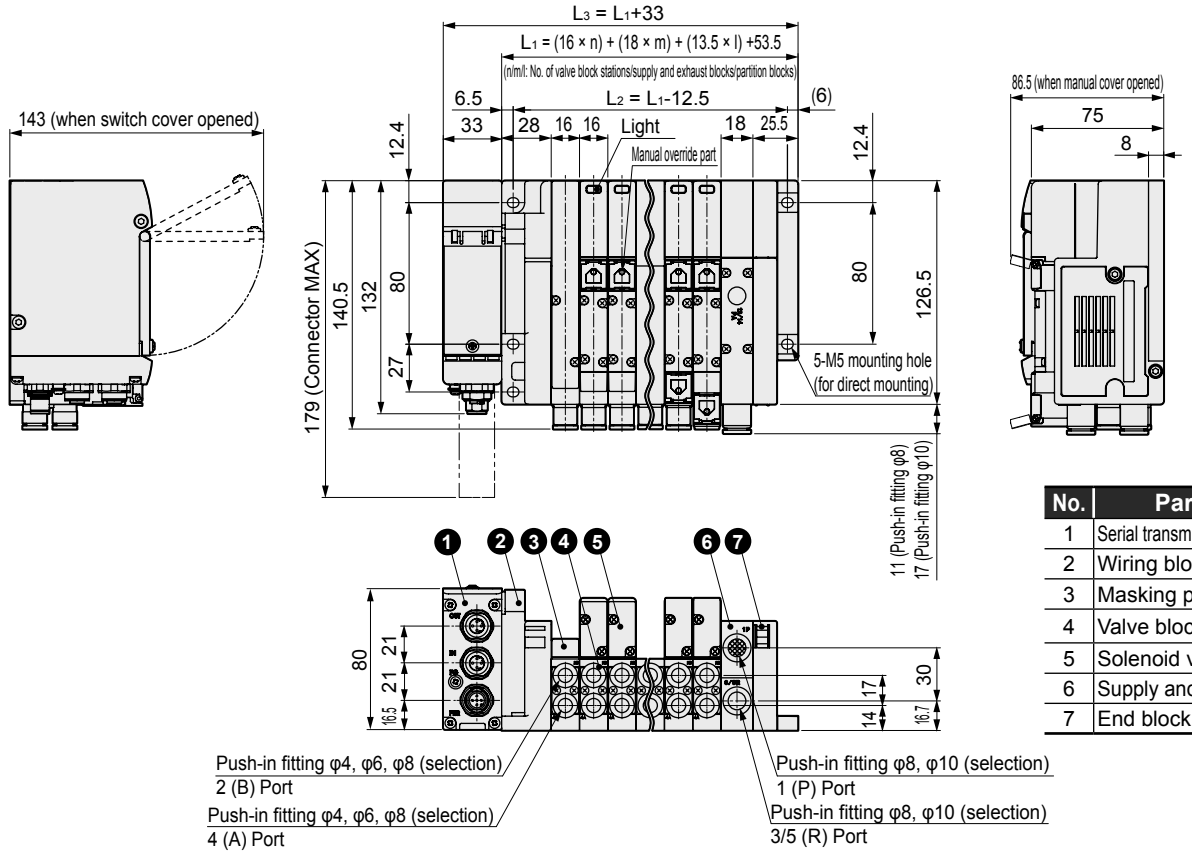
*3: There is no right-handed (R) specification.

Model No.

Only the model number for the added serial transmission slave station is included in this catalog. For details on the W4G*2/4 Series (specifications, model No., etc.), see "Pneumatic Valves" (catalog No. CB-023SA).

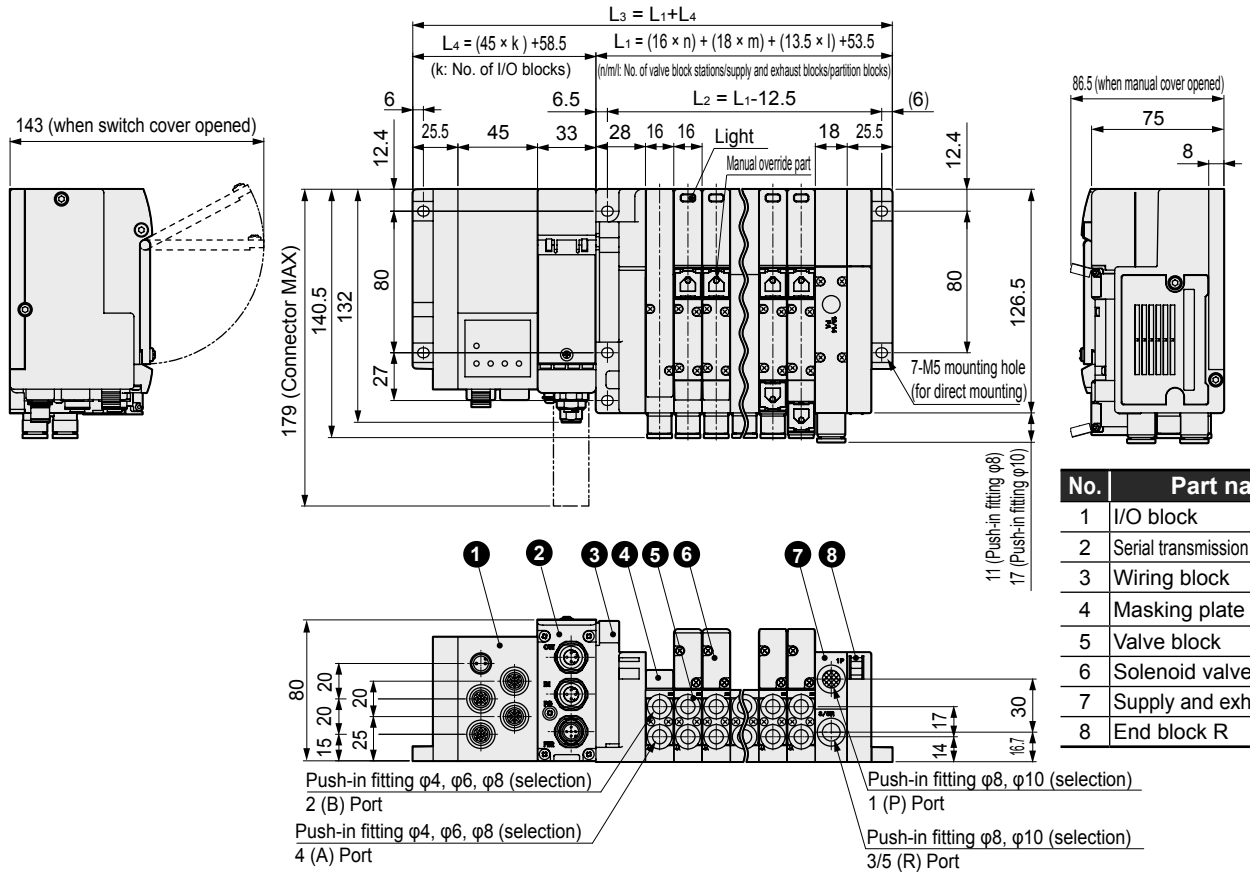
Dimensions

● MW4GB2-T7EN**



No.	Part name
1	Serial transmission slave station
2	Wiring block
3	Masking plate
4	Valve block
5	Solenoid valve body
6	Supply and exhaust block
7	End block R

● MW4GB2-T7EN*B7 (with I/O)

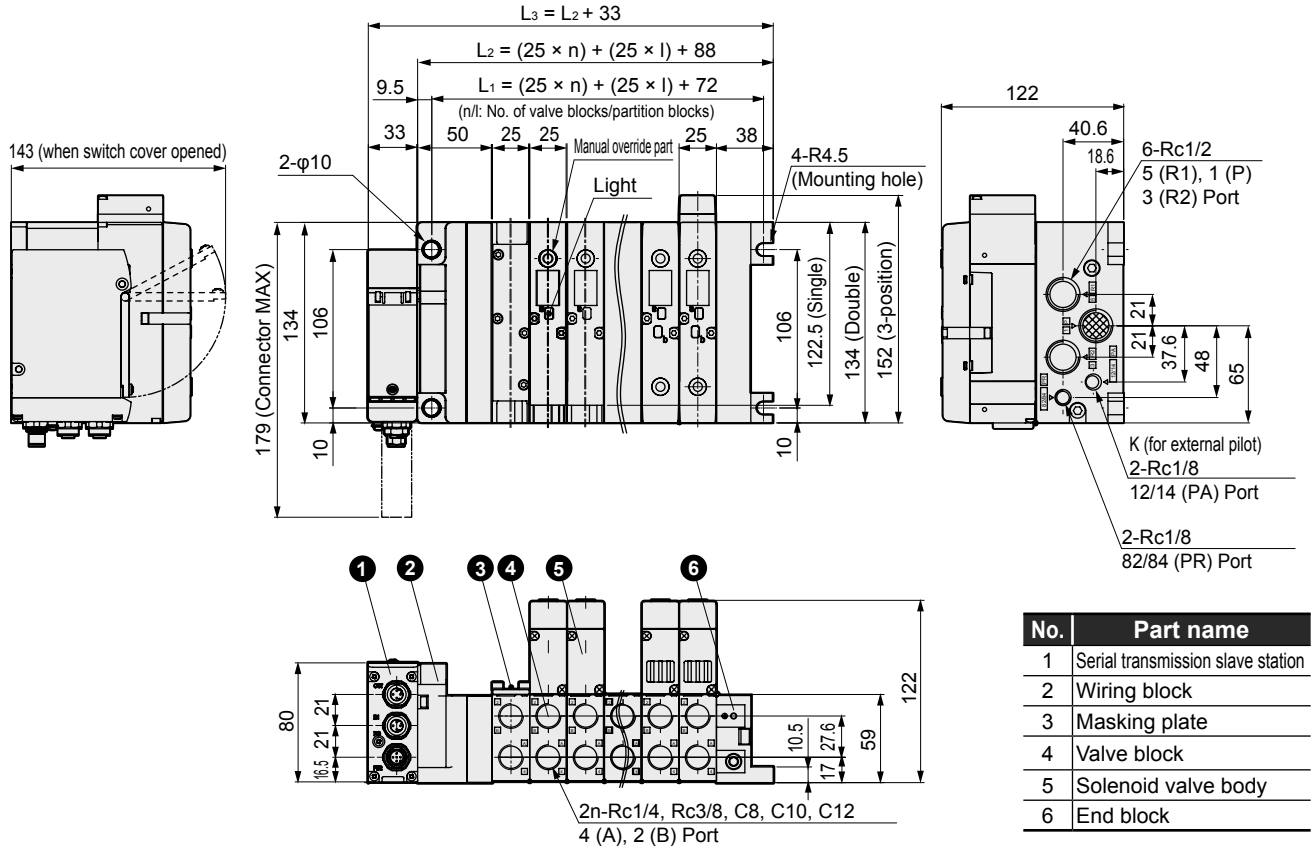


No.	Part name
1	I/O block
2	Serial transmission slave station
3	Wiring block
4	Masking plate
5	Valve block
6	Solenoid valve body
7	Supply and exhaust block
8	End block R

* Refer to "Pneumatic Valves" (No. CB-023SA) for dimensions of other models.

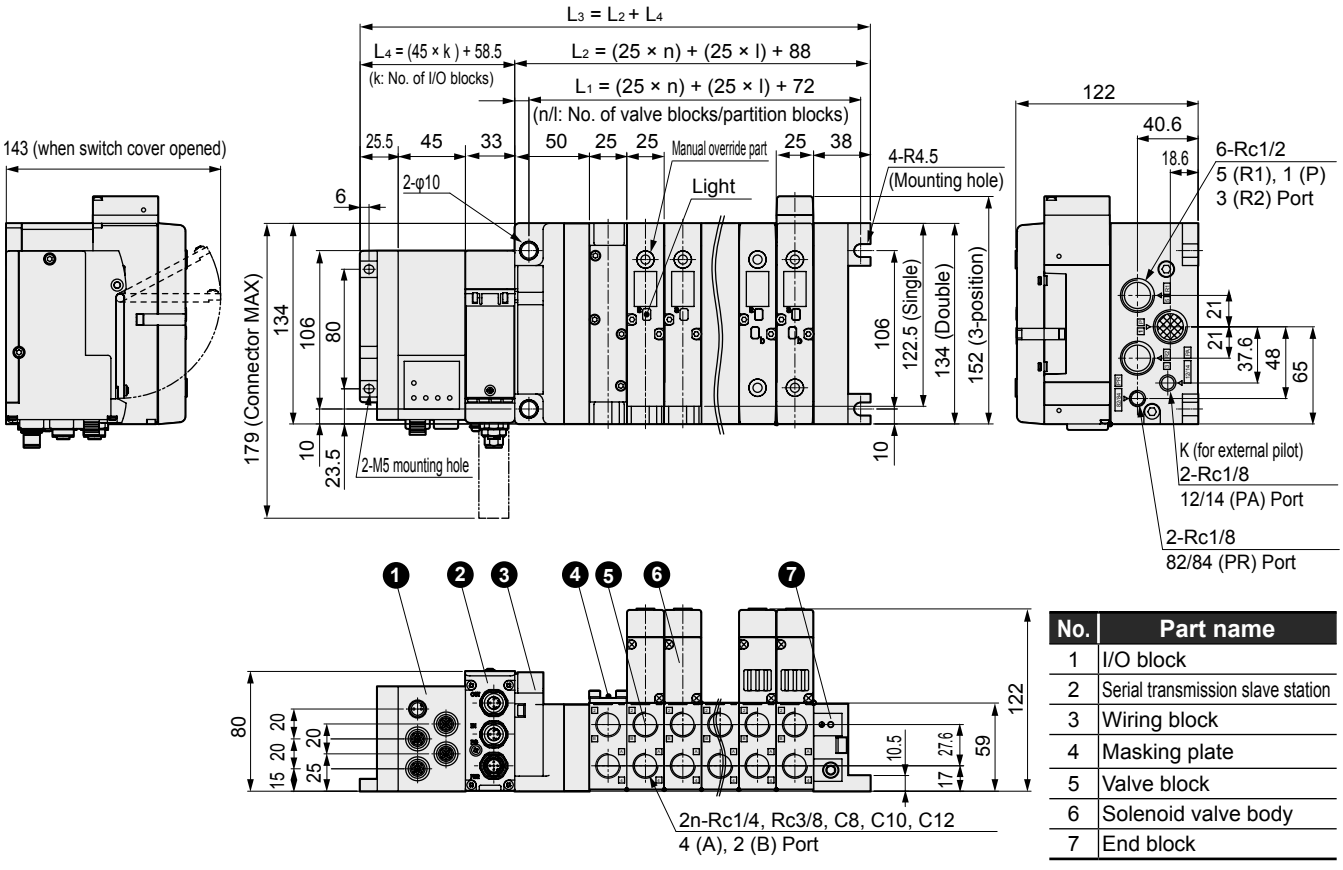
Dimensions

● MW4GB4-T7EN**



No.	Part name
1	Serial transmission slave station
2	Wiring block
3	Masking plate
4	Valve block
5	Solenoid valve body
6	End block

● MW4GB4-T7EN*B7 (with I/O)



No.	Part name
1	I/O block
2	Serial transmission slave station
3	Wiring block
4	Masking plate
5	Valve block
6	Solenoid valve body
7	End block

* Refer to "Pneumatic Valves" (No. CB-023SA) for dimensions of other models.

Technical data

Slave unit wiring

● Communication line wiring

Purchase a communication cable or connector that matches the specifications of this product.

For the wiring method, refer to the following communication connector pin array and communication cable wiring example.

Use CAT5 or higher for communication cable lines.

Recommended M12-RJ45 communication cable with connector : Type XS5W-T421-□MC-K Straight OMRON
: No.: 09 45 700 50 □□ Straight HARTING

Recommended communication connector and communication cable: No.: 09 45 600 01 □□ Cable single unit HARTING
: No.: 21 03 281 1405 Assembly M12 connector HARTING
: No.: 09 45 151 1100 Assembly RJ-45 connector HARTING

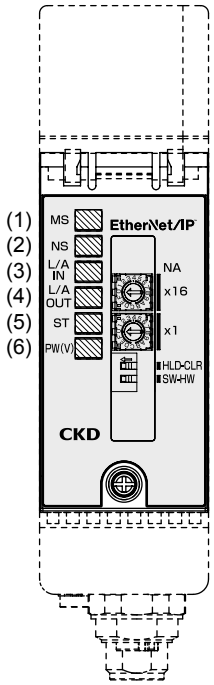
● Power supply cable wiring

Purchase a power supply cable or connector that matches the specifications of this product.

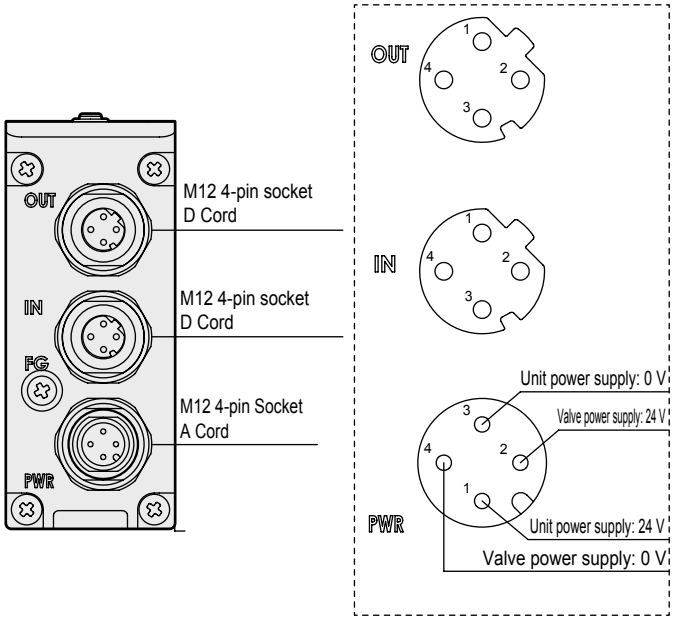
Recommended M12-loose wire power cable : Type XS2F-D421-□8□-□ Straight OMRON

Recommended power supply connector and power supply cable: No.: 21 03 212 2305 Assembly M12 connector HARTING
Electric wire size: AWG22-18, Applicable cable diameter: φ 6 to 8
* □ differs depending on the cable specifications.

LED display



Wiring



LED display description

LED	Name	Display description
(1)	MS	Status of the slave unit related to EtherNet/IP is indicated by the LED color (green/red) and state (ON/blinking)
(2)	NS	Status of the network related to EtherNet/IP is indicated by the LED color (green/red) and state (ON/blinking)
(3)	L/A IN	Status of the Ethernet port (IN side) is shown by LED color (green/yellow)
(4)	L/A OUT	Status of the Ethernet port (OUT side) is shown by LED color (green/yellow)
(5)	ST	Status of the slave unit is indicated by the LED color (green/yellow) and state (ON/blinking)
(6)	PW (V)	Lights when valve power is ON. Green lamp is ON when normal (Cannot be monitored when the unit power is not turned ON)

Communication connector pin array

Port	Pin	Signal name	Function
IN OUT	1	TXD+	Transmitted data, positive
	2	RXD+	Received data, positive
	3	TXD-	Transmitted data, negative
	4	RXD-	Received data, negative

Connector for power supply pin array

Port	Pin	Function
PWR	1	Unit power supply : 24 V
	2	Valve power supply: 24 V
	3	Unit power supply : 0 V
	4	Valve power supply: 0 V

MW4G □ 2 (reduced wiring) block manifold specifications sheet

● Contact ● Quantity/set(s) ● Delivery date /

Slip No.	Order No.

Date issued / /

Company

Contact

Order No.

● Manifold model No.

MW □ G □ 2 □ 0- □ - □ □ □ □ - □ - □

Ⓐ Model No. Ⓑ Solenoid position Ⓒ Port size Ⓓ Reduced wiring connection Ⓔ Terminal/ connector pin array method Ⓕ Option Ⓖ Mount Note Ⓗ Station No. Ⓘ Voltage

Note: This is not a DIN rail mount.

When filling in this field, select the model No. from Block configurations located in "Pneumatic Valves" (CB-023SA).

Part name (Page)	Model No.	Layout position																													Quantity
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
I/O block	**NW4GB2-IN-□-□**																														
	NW4GB2-OUT-□-B																														
Wiring block	**NW4G2-T7EN□**																														
Valve block with solenoid valve	**NW4G□2□0-□**																														
	NW4G□2□0-□																														
	NW4G□2□0-□																														
	NW4G□2□0-□																														
	NW4G□2□0-□																														
	NW4G□2□0-□																														
	NW3G□2□0-□																														
	NW3G□2□0-□																														
Valve block with masking plate	**NW4G□2-MPS-□**																														
	NW4G□2-MPD-□																														
Supply and exhaust block	**NW4G2-Q□-□-□**																														
	NW4G2-Q□-□-□																														
	NW4G2-Q□-□-□																														
	NW4G2-Q□-□-□																														
Various spacers	Air supply spacer **W4G2-P□-□**																														
	Exhaust spacer **W4G2-R-□**																														
	Spacer type pilot check valve **W4G2-PC-M**																														
	Individual air supply compatible spacer with in-stop valve spacer **W4G2-PIS-□**																														
Partition block	**NW4G2-□**																														
	NW4G2-□																														
	NW4G2-□																														
End block	**NW4G2-□R**																														

		Blanking plug				Silencer		Tag plate		Attached part
		GWP4-B		**GWP6-B**		**SLW-H8**		B		
		GWP8-B		**GWP10-B**		**SLW-H10**				

* Wiring block, I/O block is side wiring only.

MW4G □ 4 Block manifold specifications sheet

● Contact ● Quantity set(s) ● Delivery date /

Slip No.	Order No.

Date issued / /

Company

Contact

Order No.

● Manifold model No.

MW4G□ 4 □ 0- □ - □ □ - □ - □

Ⓐ Model No. Ⓑ Solenoid position Ⓒ Port size Ⓓ Wiring method Note Ⓔ Terminal/ connector pin array method Ⓕ Option Ⓖ Station No. Ⓗ Voltage

When filling in this field, select the model No. from Block configurations located in "Pneumatic Valves" (CB-023SA).

Part name		Model No.	Installation position																						Quantity
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
	End block	**NW4G4-E□R□**																							
	I/O block	**NW4GB2-IN-□-□**																							
		NW4GB2-OUT-□-B																							
	Wiring block	**NW4G4-T7EN□**																							
	Valve block with solenoid valve	**NW4G□4□0-□-□-□**																							
		NW4G□4□0-□-□-□																							
		NW4G□4□0-□-□-□																							
		NW4G□4□0-□-□-□																							
		NW4G□4□0-□-□-□																							
	Valve block with masking plate	**NW4G□4-MP□-□-□**																							
		NW4G□4-MP□-□-□																							
Spacer	Independent air supply spacer	**W4G4-P-□**																							
Spacer	Independent exhaust spacer	**W4G4-R-□**																							
Attachment	Silencer (resin)	**SLW-15A**	List the number of units to be used in the quantity field on the right.																						
Attachment	Blanking plug	**GWP8-B**																							
Attachment		**GWP10-B**																							
Attachment		**GWP12-B**																							

* I/O block is side wiring only.
* As one side is for air supply and one side is for exhaust, use the air supply spacer or exhaust spacer when operating valves simultaneously.
* As one side is for air supply and one side is for exhaust, partition block and partition plug cannot be used.
* For wiring block T7EN (EtherNet/IP), there is no right-handed (R) specification.

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