CKD

New Products

PROFINET Compatible Serial Transmission Slave Unit W4G-T7 Series

PROFINET compatible slave units added to series!

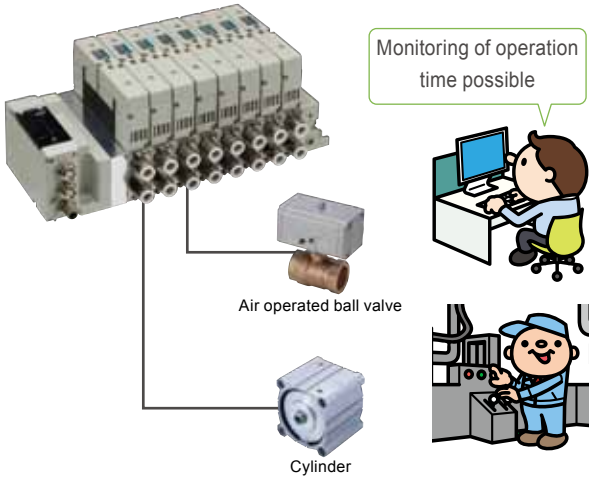
PROFINET®

- Select from 32-point, 16-point output, or 16-point input and 16-point output, and PNP or NPN.
- Can be used with both W4G2 and W4G4.
- IP65 structure.

Ideal for predictive maintenance

Counter function

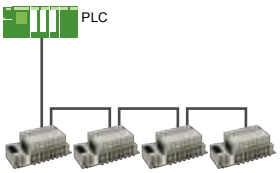
You can count the number of outputs from the PLC to the valve, and monitor the operation cycle of the device connected to the valve and secondary side.
It anticipates the maintenance period from the operation cycle and nominal lifespan, and makes preventative maintenance possible.



A variety of connection types

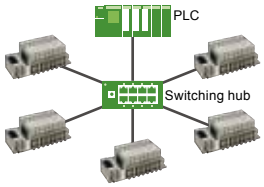
Wiring with short total length

[Line type]
A connection that links devices together in a row.



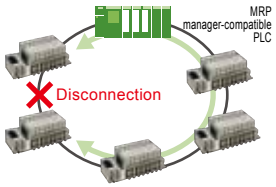
Wiring with a high flexibility

[Star type]
A radial connection centered around the switching hub.



Wiring with high reliability

[Ring type] (MRP)
A connection that links devices into a circle.
If there is disconnection in one spot, communication in the reverse direction is possible.



* This device is compatible with MRP client function. When connecting in a ring, MRP manager function-compatible PLC is necessary.

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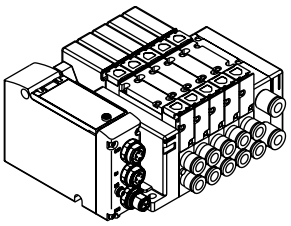
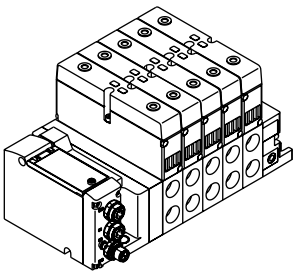
CC-1357A

Specifications

W4G2
(Without I/O block)



W4G4
(Without I/O block)

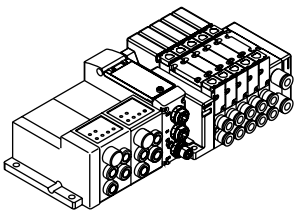


● Slave unit dedicated for valves (without I/O block)

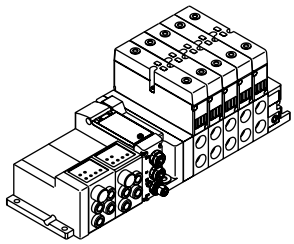
Descriptions		T7EP1	T7EP2 *1	T7EPP1	T7EPP2 *1
Network name		PROFINET			
Power supply Voltage	Unit side	24 VDC ±10%			
	Valve side	24 VDC +10%, −5%			
Power consumption	Unit side	130 mA or less			
	Valve side	15 mA or less (excluding load current)			
Valve output		NPN		PNP	
I/O points		16-point output	32-point output	16-point output	32-point output
LED Display	Power supply	2 positions: PW, PW (V)			
	Communication	4 positions: RUN, ERR, L/A IN, L/A OUT, INFO			
Degree of protection		IP65			

*1: No 32-point output when connecting with W4G4 valve.

W4G2
(with I/O block)



W4G4
(with I/O block)



● Slave unit with I/O block

Descriptions		T7EPB7	T7EPPB7
Network name		PROFINET	
Power supply Voltage	Unit side	24 VDC ±10%	
	Valve side	24 VDC +10%, −5%	
Power consumption	Unit side	130 mA or less (*2: excluding input block current)	
	Valve side	15 mA or less (excluding load current)	
Valve output		NPN	PNP
I/O points		16-point input/ 16-point output	16-point input/ 16-point output
LED Display	Power supply	2 positions: PW, PW (V)	
	Communication	4 positions: RUN, ERR, L/A IN, L/A OUT, INFO	
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).

* The MW4GB4 and MW4GZ4 series are available for orders of slave units only. Contact CKD for order model Nos.

Compatibility

MW3/4GA2, MW4GB2, MW4GZ2
MW4GB4, MW4GZ4

Individual specifications

● MW4G*2

Descriptions		T7EP*1	T7EP*2	T7EP*7
Max. station No.	Standard wiring	16	18	16
	Double wiring	8	16	8
Max. number of solenoids		16	32	16
Max. number of I/O blocks (I/O)		-	-	(16/8)

● MW4G*4

Descriptions		T7EP*1	T7EP*7
Max. station No.	Standard wiring	16	16
	Double wiring	8	8
Max. number of solenoids		16	16
Max. number of I/O blocks (I/O)		-	(16/8)

How to order

● MW4G *2 Manifold model No. (example)

MW4GA2 **1** 0 - **C8** - **T7EPB7** **W** **Y20** *1 *2 - **6** - **3**

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

[Example of model No.]

- Ⓐ Model No.: 5-port valve/body piping
- Ⓑ Solenoid position: 2-position single
- Ⓒ Port size: φ8 push-in fitting
- Ⓓ Serial transmission: Drip proof thin I/O PROFINET 16/16 point I/O (NPN valve output)
- Ⓔ Terminal/connector pin array: Double wiring
- Ⓕ Option: 2 Input block
  *Cannot select Y01 - Y04
- Ⓖ Mount: Direct mount
- Ⓗ Station No.: 6 stations
- Ⓘ Voltage: 24 VDC

*Regarding listed model Nos.

This catalog only lists model Nos. for serial transmission slave units that have just been added (T7EP*). Refer to "Pneumatic Valves" (Catalog No. CB-023SA) for details on the W4G *2/4 Series, such as specifications and model No.

*1: All serial transmission slave units and I/O blocks are side wiring types.
*2: Not a DIN rail mount.

Code	Content
Ⓓ Serial transmission slave unit (lamp/surge suppressor provided as standard)	
T7EP1	Drip proof thin PROFINET 16-point output (NPN valve output)
T7EPP1	Drip proof thin PROFINET 16-point output (PNP valve output)
T7EP2	Drip proof thin PROFINET 32-point output (NPN valve output)
T7EPP2	Drip proof thin PROFINET 32-point output (PNP valve output)
T7EPB7	Drip proof thin I/O PROFINET 16-point input/16-point output (NPN valve output)
T7EPPB7	Drip proof thin I/O PROFINET 16-point input/16-point output (PNP valve output)

● MW4G *4 Manifold model No. (example)

MW4GB4 **8** 0 - **10** - **T7EPP1** **W** **M** - **6** - **3** *3

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

[Example of model No.]

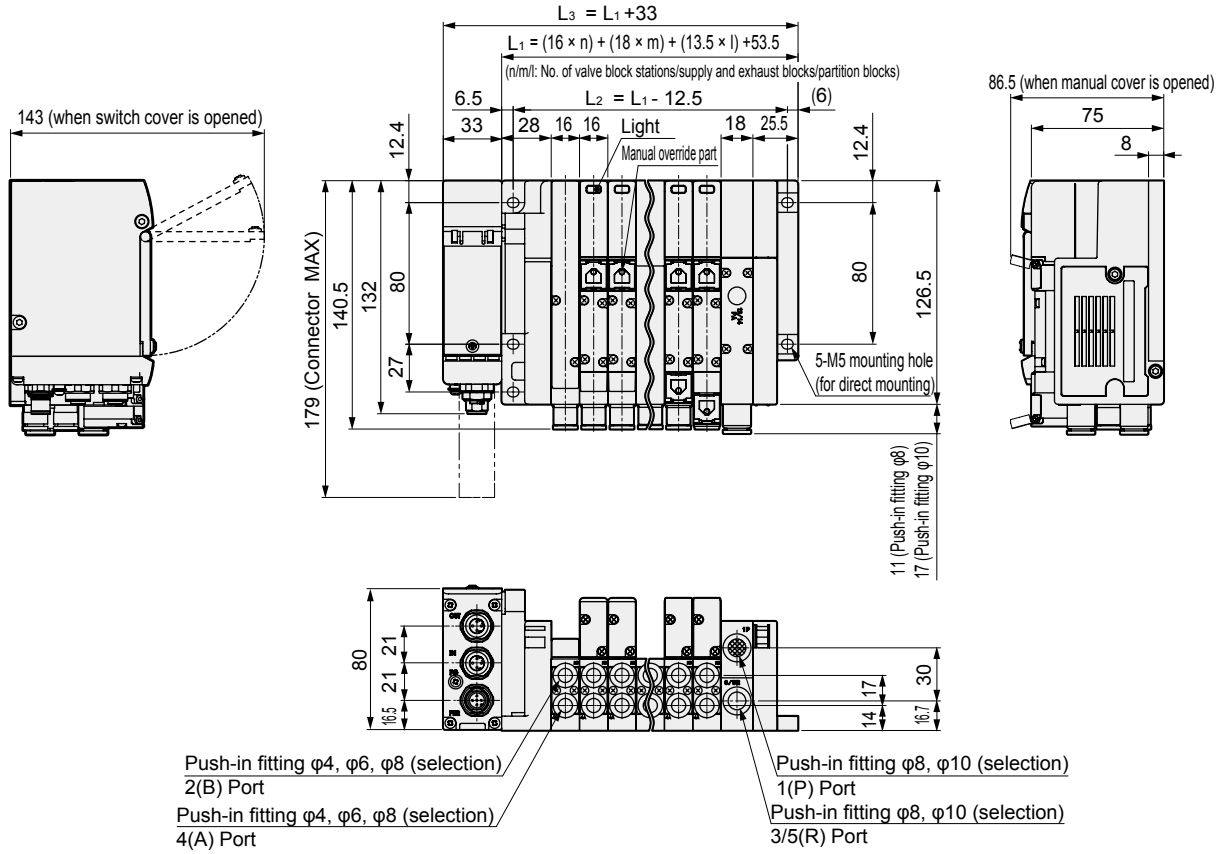
- Ⓐ Model No.: 5-port valve/base side piping
- Ⓑ Solenoid position: Mix manifolds
- Ⓒ Port size: Rc3/8
- Ⓓ Serial transmission: Drip proof thin I/O PROFINET 16-point output (PNP valve output)
- Ⓔ Terminal/connector pin array: Double wiring
- Ⓕ Option: Non-locking manual override
- Ⓖ Station No.: 6 stations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

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

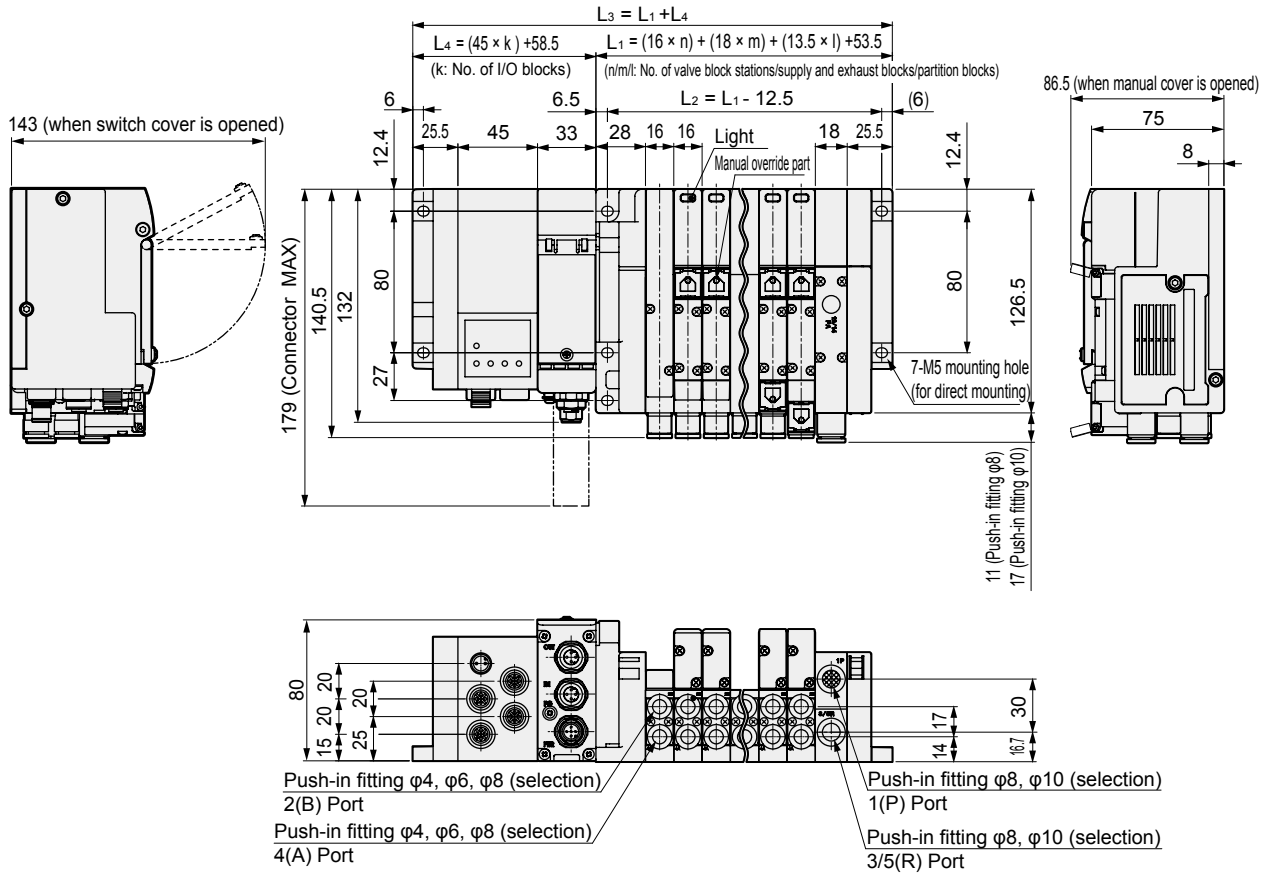
Code	Content
Ⓓ Serial transmission slave unit (lamp/surge suppressor provided as standard)	
T7EP1	Drip proof thin PROFINET 16-point output (NPN valve output)
T7EPP1	Drip proof thin PROFINET 16-point output (PNP valve output)
T7EPB7	Drip proof thin I/O PROFINET 16-point input/16-point output (NPN valve output)
T7EPPB7	Drip proof thin I/O PROFINET 16-point input/16-point output (PNP valve output)

Dimensions

● MW4GB2-T7EP**



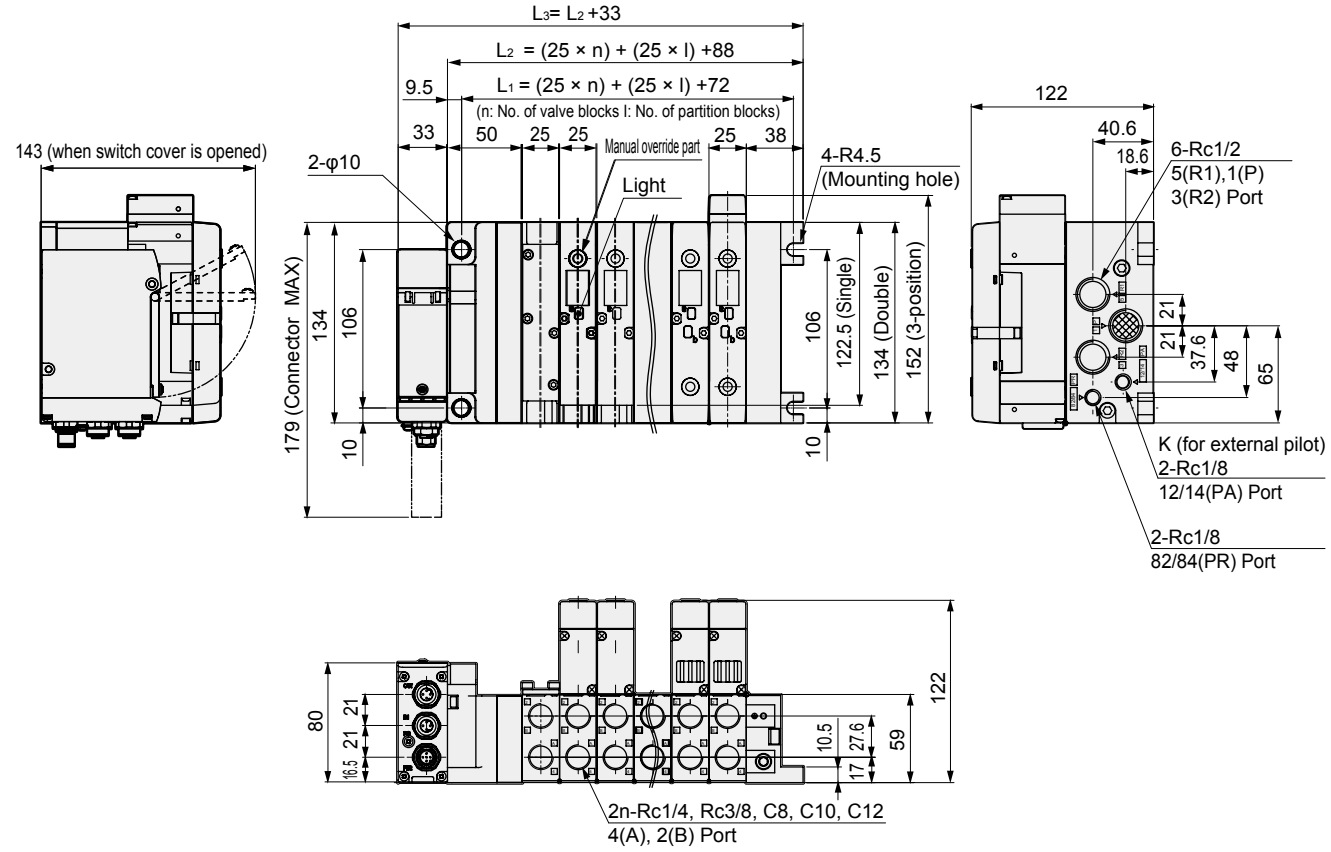
● MW4GB2-T7EP*B7 (I/O)



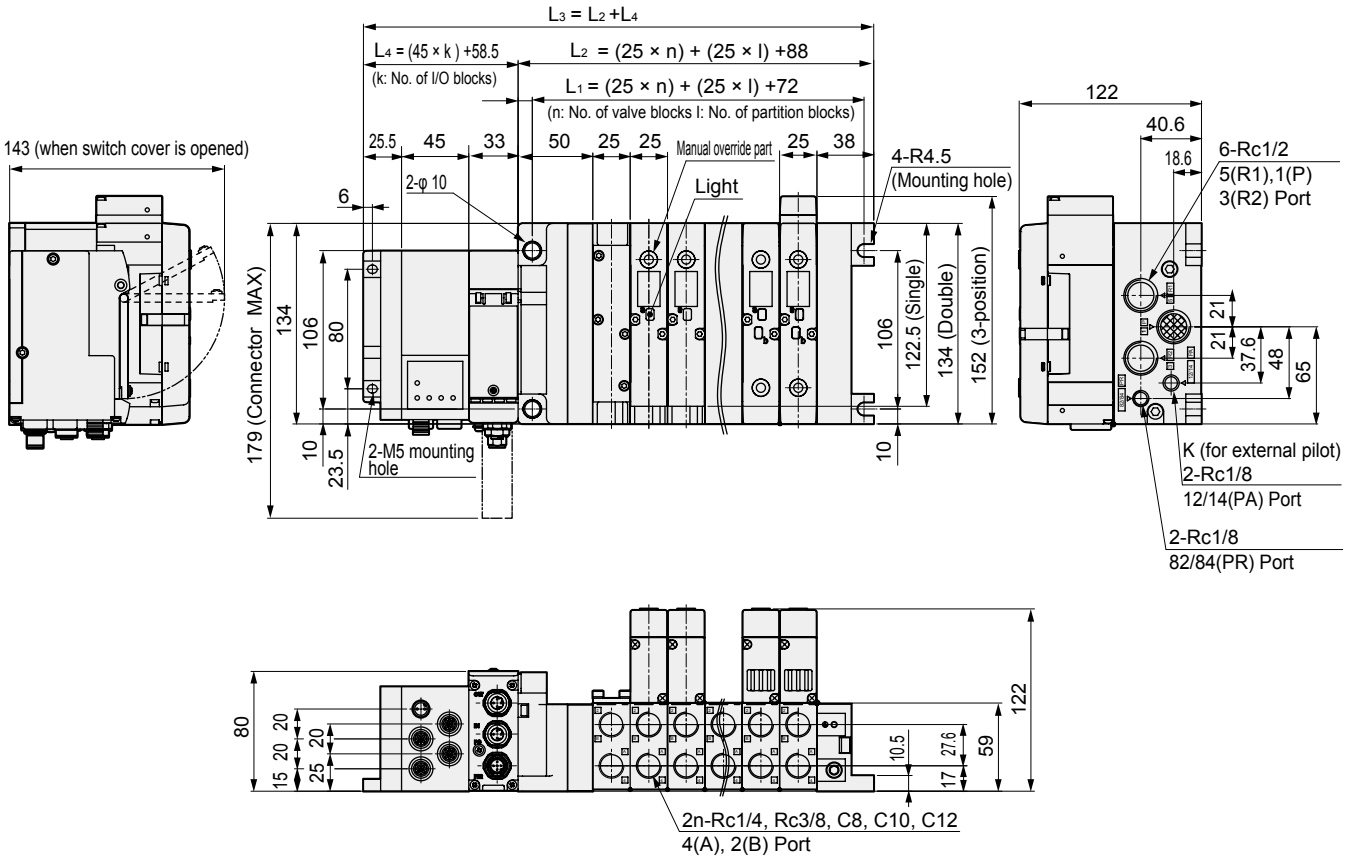
* Refer to "Pneumatic Valves" (No. CB-023SA) for details on the other model Nos.

Dimensions

● MW4GB4-T7EP**



● MW4GB4-T7EP*B7 (I/O)



* Refer to "Pneumatic Valves" (No. CB-023SA) for details on the other model Nos.

Technical data

Slave unit wiring

● Wiring of communication line

Please purchase communication cables or connectors that are compatible with the specifications of this product.
For wiring method, refer to the following communication connector pin array and communication cable wiring example.
Use CAT5 or higher for communication cable lines.

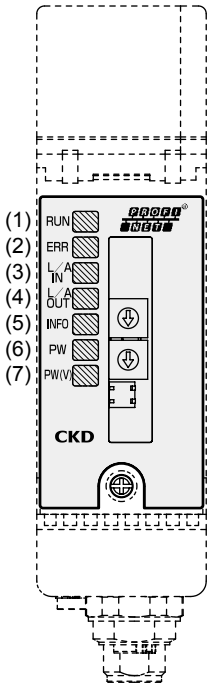
Recommended M12-RJ45 Communication cable with connector
: XS5W-T421-□MC-K straight Manufactured by OMRON Corporation
: Part No.: 09 45 700 50□□ straight Manufactured by HARTING
Recommended communication connector and communication cable
: Part No. 09 45 600 01□□ Cable Manufactured by HARTING
: Part No.: 21 03 281 1405 Assembly M12 connector Manufactured by HARTING
: Part No.: 09 45 151 1100 Assembly RJ-45 connector Manufactured by HARTING

● Power cable wiring

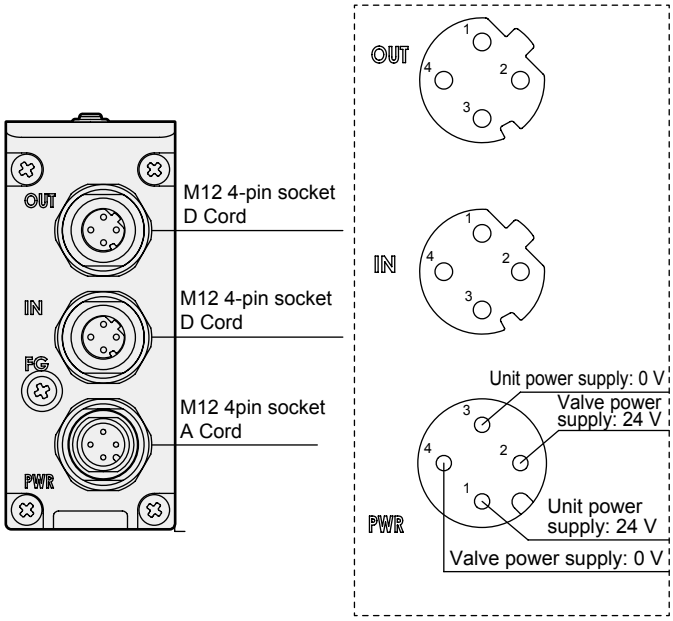
Please purchase power cables or connectors that are compatible with the specifications of this product.

Recommended M12-unfastened lead power cable
: XS2F-D421-□8□-□ Straight Manufactured by OMRON Corporation
Recommended power cable: Part No.: 21 03 212 2305 Assembly M12 connector Manufactured by HARTING
Electric wire size: AWG22-18, Applicable cable diameter: φ6 to 8
* □ differs depending on the cable specifications

LED display



Wiring



LED display description

LED	Name	Display description
(1)	RUN	Communication status of PROFINET is indicated by the LED state (ON/blinking)
(2)	ERR	Abnormal communication status of PROFINET is indicated by the LED state (ON/blinking)
(3)	L/A IN	Status of the Ethernet port (IN side) is indicated by the LED state (ON/blinking)
(4)	L/A OUT	Status of the Ethernet port (OUT side) is indicated by the LED state (ON/blinking)
(5)	INFO	Status of the slave unit is indicated by the LED state (ON/blinking)
(6)	PW	Indicates the power status of the unit power supply. Lit in green when powered ON
(7)	PW (V)	Indicates the power status of the valve power supply. Lit in green when powered ON (Cannot be monitored when the unit power is not turned ON)

Communication connector pin array

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

Power supply connector 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 Ⓕ Option Ⓖ Mount type* Ⓗ Station No. Ⓘ Voltage

* Not a DIN rail mount.

Select a model number from "Block components" for "Pneumatic valves" (No. CB-023SA) when inputting.

Part name (page)	Model No.	Layout position																													Qty.
		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-T7EP□**																														
With solenoid valve Valve block	**NW4G□2□0-□**																														
	NW4G□2□0-□																														
	NW4G□2□0-□																														
	NW4G□2□0-□																														
	NW4G□2□0-□																														
	NW4G□2□0-□																														
	NW3G□2□0-□																														
	NW3G□2□0-□																														
With masking plate Valve block	**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 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* Ⓔ Terminal/ connector pin array Ⓕ Option Ⓖ Station No. Ⓗ Voltage

Select a model number from "Block components" for "Pneumatic valves" (No. CB-023SA) when inputting.

	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-T7EP□□□□□**																							
	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□□-□□-□																							
Spacers	Independent air supply spacer	**W4G4-P-□**																							
Spacers	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.
* No right side (R) specification when wiring block T7EP (PROFINET).

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