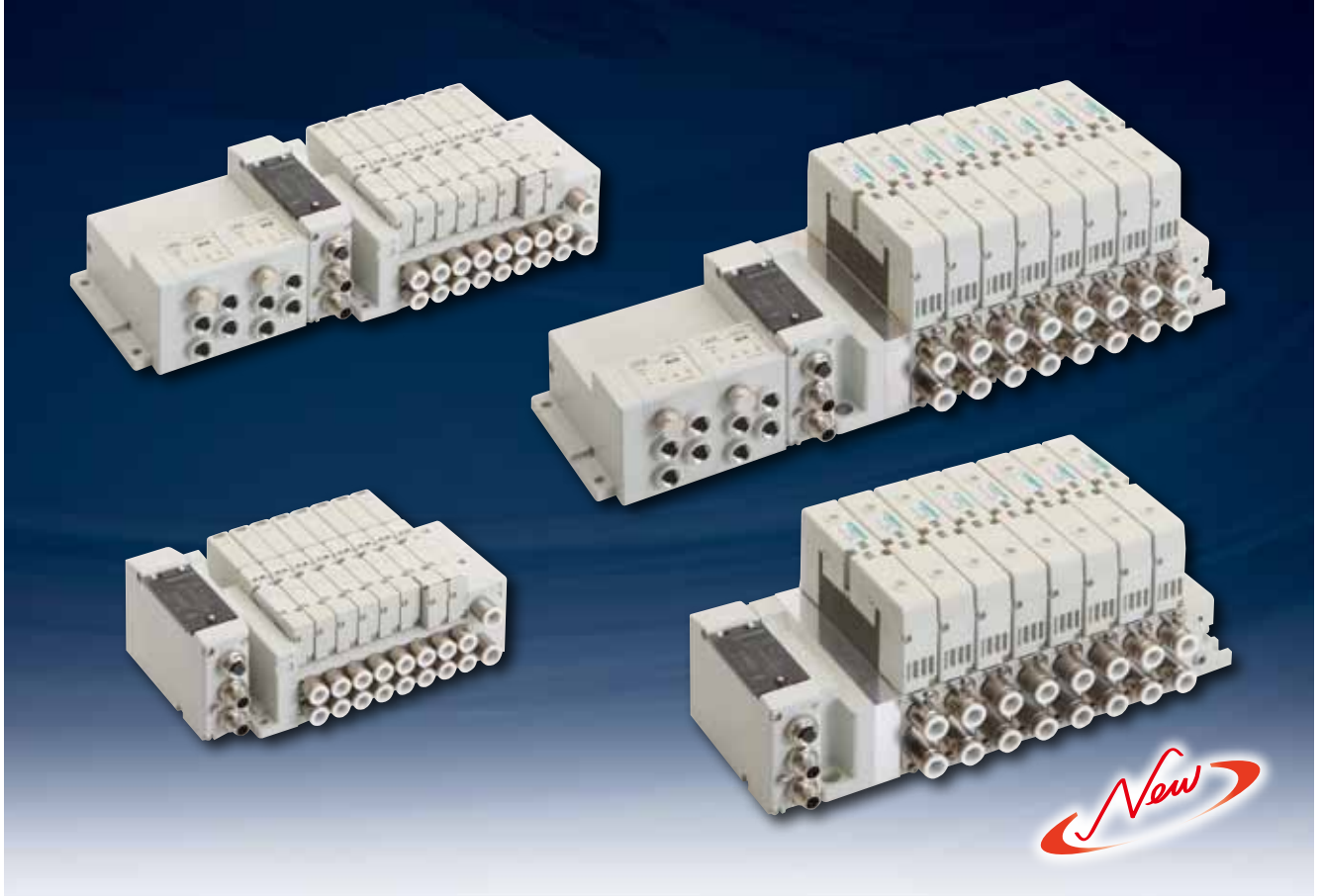# CKD

DeviceNet compatible serial transmission slave station

W4G-T7 Series

Introducing a new DeviceNet compatible slave unit to the series

Overview

- Following the introduction of the T7 series DeviceNet slave unit, 16/32 point, NPN/PNP output, 16 point input and 16 point output - NPN/PNP selections are possible.
- 16 point input and 16 point output can be selected for the W4G4 series.

Features

- The QuickConnect function enables shortening of the time to establish communication.

- Address setting via the network is possible.

- IP65 structure.

[Compatibility]

MW3/4GA2, MW4GB2, MW4GZ2
MW4GB4, MW4GZ4
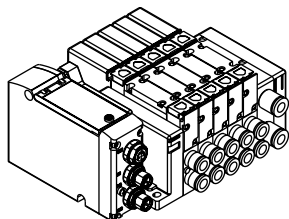
RoHS CE

⚠ Always read the safety precautions in "Pneumatic Valves" (No. CB-023SA) before use.
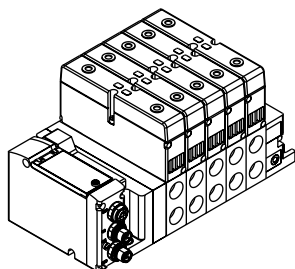
CKD Corporation

CC-1350A

W4G-T7 Series

Specifications

W4G2
(without I/O block)

W4G4
(without I/O block)

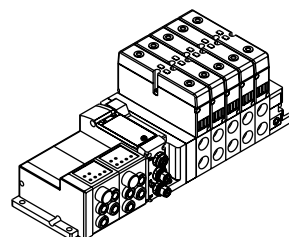### ● Slave unit dedicated for valves (without I/O block)

Descriptions		T7D1	T7D2 *1	T7DP1	T7DP2 *1
Network name		DeviceNet			
Power supply Voltage	Communication side	11 to 25 VDC			
	Valve side	24 VDC +10%, -5%			
Consumption Current	Communication side	40 mA or less	50 mA or less	40 mA or less	50 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 areas: Communication power supply (PW), valve power supply (PW (V))			
	Communication	2 areas: MS, NS			
Degree of protection		IP65			

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

W4G2
(with I/O block)
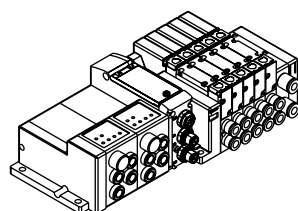
W4G4
(with I/O block)

● Slave unit with I/O block

Descriptions		T7DB7	T7DPB7
Network name		DeviceNet	
Power supply Voltage	Communication side	11 to 25 VDC	
	Valve side	24 VDC +10%, -5%	
Consumption Current	Communication side	40 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 areas: Communication power supply (PW), valve power supply (PW (V))	
	Communication	2 areas: MS, NS	
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).

Compatibility

MW3/4GA2, MW4GB2, MW4GZ2
MW4GB4, MW4GZ4

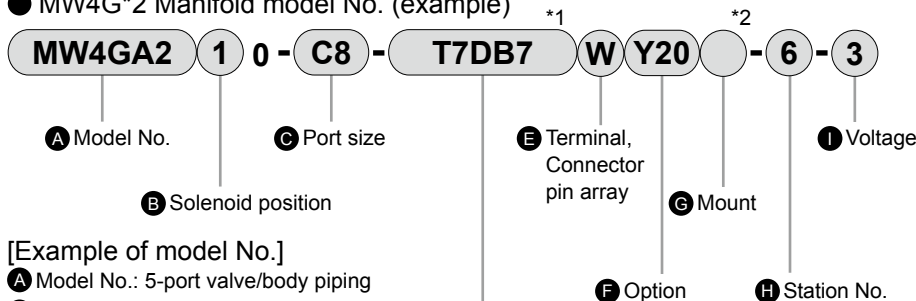**CKD**

Individual specifications

● MW4G*2

Descriptions		T7D*1	T7D*2	T7D*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		T7D*1	T7D*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 — T7DB7 *1 — W — Y20 *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 DeviceNet 16/16 point I/O (NPN valve output)
Ⓔ Terminal/connector pin array method
  : 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 (T7D*). Refer to "Pneumatic Valves" (Catalog No. CB-023SA) for details on the W4G*2/4 Series, regarding specifications and model No.
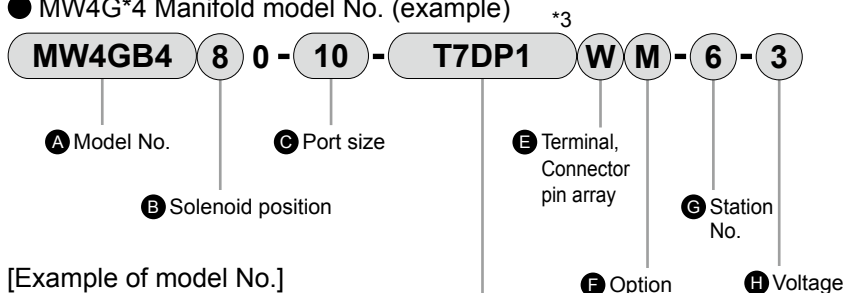
*1: All serial transmission slave units and I/O blocks are side wiring types.
*2: Not a DIN rail mount type.

Code	Content
Ⓓ Serial transmission slave unit (lamp/surge suppressor provided as standard)	
T7D1	Drip proof thin DeviceNet 16 point output (NPN valve output)
T7DP1	Drip proof thin DeviceNet 16 point output (PNP valve output)
T7D2	Drip proof thin DeviceNet 32 point output (NPN valve output)
T7DP2	Drip proof thin DeviceNet 32 point output (PNP valve output)
T7DB7	Drip proof thin I/O DeviceNet 16 point input/16 point output (NPN valve output)
T7DPB7	Drip proof thin I/O DeviceNet 16 point input/16 point output (PNP valve output)

● MW4G*4 Manifold model No. (example)

MW4GB4 — 8 — 0 — 10 — T7DP1 *3 — W — M — 6 — 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 DeviceNet 16 point output (PNP valve output)
Ⓔ Terminal/connector pin array method
  : 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)	
T7D1	Drip proof thin DeviceNet 16 point output (NPN valve output)
T7DP1	Drip proof thin DeviceNet 16 point output (PNP valve output)
T7DB7	Drip proof thin I/O DeviceNet 16 point input/16 point output (NPN valve output)
T7DPB7	Drip proof thin I/O DeviceNet 16 point input/16 point output (PNP valve output)

W4G-T7 Series

Dimensions

● MW4GB2-T7D**

$L_3 = L_1 + 33$

$L_1 = (16 \times n) + (18 \times m) + (13.5 \times l) + 53.5$

(n: No. of valve block stations m: No. of supply and exhaust blocks l: No. of partition blocks)

$L_2 = L_1 - 12.5$

143 (when switch cover opened)

86.5 (when manual cover opened)

75

9

6.5

33 28 16 16

Light

Manual override part

18 25.5

(6)

12.4

12.4

179 (Connector MAX)

140.5

132

80

27

80

126.5

12/14

PA

5-M5 mounting hole
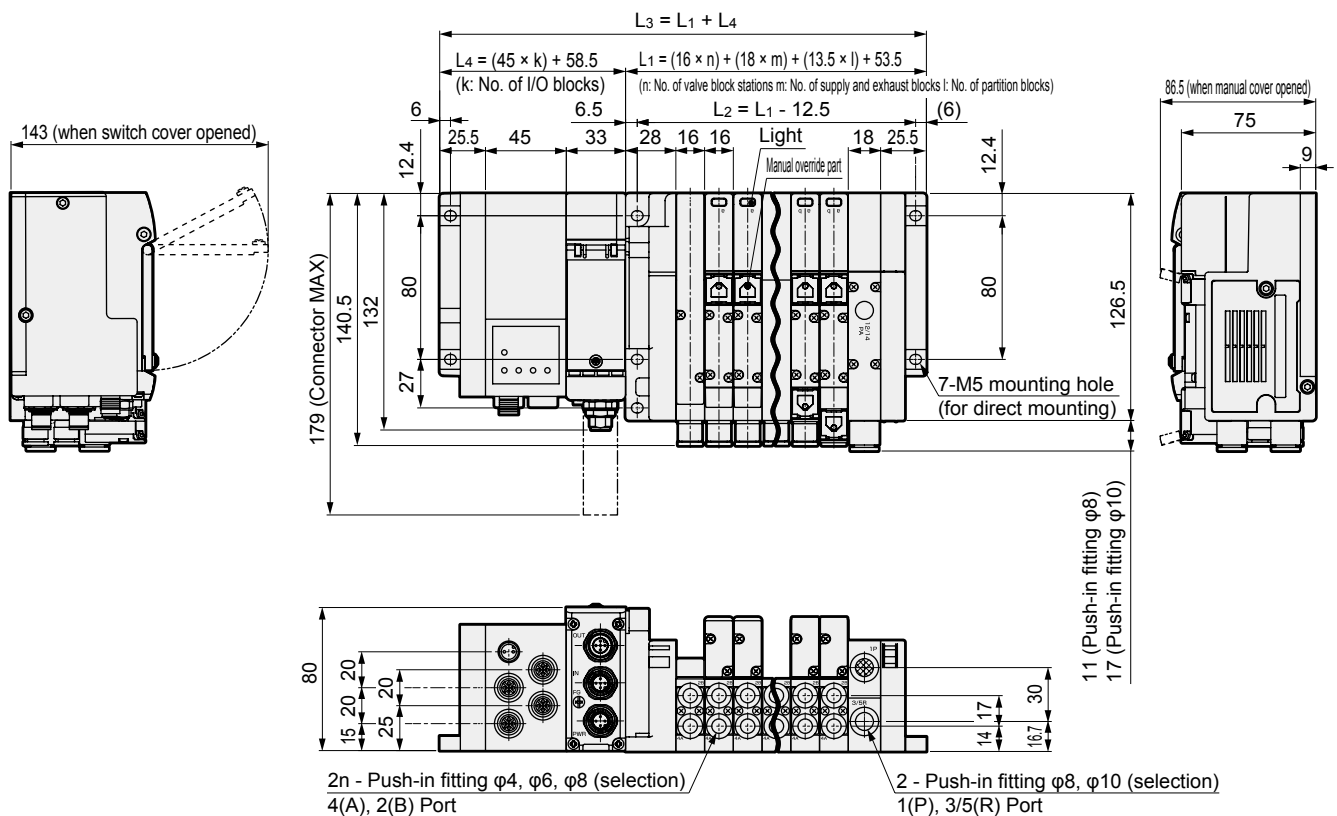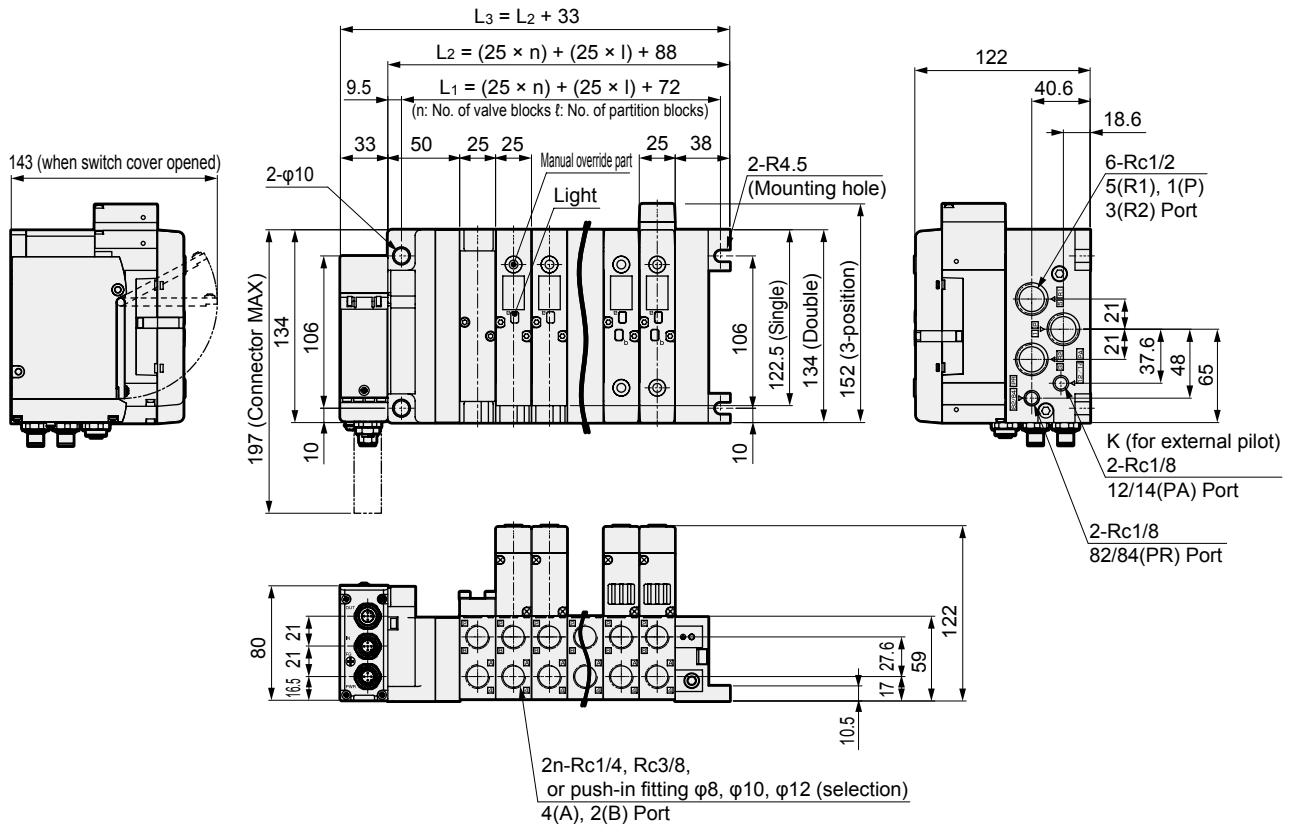(for direct mounting)

11 (Push-in fitting φ8)
17 (Push-in fitting φ10)

80

21 21

21 21

16.5

1P

14 17

16.7

30

2n - Push-in fitting φ4, φ6, φ8 (selection)
4(A), 2(B) Port

2 - Push-in fitting φ8, φ10 (selection)
1(P), 3/5(R) Port

● MW4GB2-T7D*B7 (I/O)

$L_3 = L_1 + L_4$

$L_4 = (45 \times k) + 58.5$
(k: No. of I/O blocks)

$L_1 = (16 \times n) + (18 \times m) + (13.5 \times l) + 53.5$
(n: No. of valve block stations m: No. of supply and exhaust blocks l: No. of partition blocks)

$L_2 = L_1 - 12.5$

143 (when switch cover opened)

86.5 (when manual cover opened)

75

9

6

25.5 45

6.5

33

28 16 16

Light

Manual override part

18 25.5

(6)

12.4

12.4

179 (Connector MAX)

140.5

132

80

27

80

126.5

12/14

PA

7-M5 mounting hole
(for direct mounting)

11 (Push-in fitting φ8)
17 (Push-in fitting φ10)

80

20 20

15 20 20

25 20

1P

14 17

16.7

30

2n - Push-in fitting φ4, φ6, φ8 (selection)
4(A), 2(B) Port

2 - Push-in fitting φ8, φ10 (selection)
1(P), 3/5(R) Port

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

CKD

Dimensions

● MW4GB4-T7D**

$L_3 = L_2 + 33$

$L_2 = (25 \times n) + (25 \times l) + 88$

$L_1 = (25 \times n) + (25 \times l) + 72$
(n: No. of valve blocks l: No. of partition blocks)

9.5

33 50 25 25 Manual override part 25 38

143 (when switch cover opened)

2-φ10

Light

2-R4.5 (Mounting hole)

122

40.6

18.6

6-Rc1/2
5(R1), 1(P)
3(R2) Port

197 (Connector MAX)

134
106
10

134
106
10

122.5 (Single)
134 (Double)
152 (3-position)

21 21
37.6
48
65

K (for external pilot)
2-Rc1/8
12/14(PA) Port

2-Rc1/8
82/84(PR) Port

80 21 21
16.5

122
59
27.6
17

10.5

2n-Rc1/4, Rc3/8,
or push-in fitting φ8, φ10, φ12 (selection)
4(A), 2(B) Port

● MW4GB4-T7D*B7 (I/O)

$L_3 = L_2 + L_4$

$L_4 = (45 \times k) + 58.5$
(k: No. of I/O blocks)

$L_2 = (25 \times n) + (25 \times l) + 88$

$L_1 = (25 \times n) + (25 \times l) + 72$
(n: No. of valve blocks l: No. of partition blocks)

9.5

25.5 45 33 50 25 25 Manual override part 25 38

143 (when switch cover opened)

2-M5 mounting hole
6

2-φ10

Light

2-R4.5 (Mounting hole)

122

40.6

18.6

6-Rc1/2
5(R1), 1(P)
3(R2) Port

197 (Connector MAX)

134
106
80
10
23.5

106
10

122.5 (Single)
134 (Double)
152 (3-position)

21 21
37.6
48
65

K (for external pilot)
2-Rc1/8
12/14(PA) Port

2-Rc1/8
82/84(PR) Port

80 15 20 20 25 20
POWER

122
59
27.6
17

10.5

2n-Rc1/4, Rc3/8,
or push-in fitting φ8, φ10, φ12 (selection)
4(A), 2(B) Port

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

W4G-T7 Series

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.

Connector with cable for both sides	: DCA1-5CN**W1 (socket/plug)	Manufactured by OMRON Corporation
IN connector with cable for one side	: DCA1-5CN**F1 (socket)	Manufactured by OMRON Corporation
OUT connector	: DCA1-5CN**H1 (plug)	Manufactured by OMRON Corporation

● Wiring for the power supply socket

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 communication plug and power cable : Part No.: 2103 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
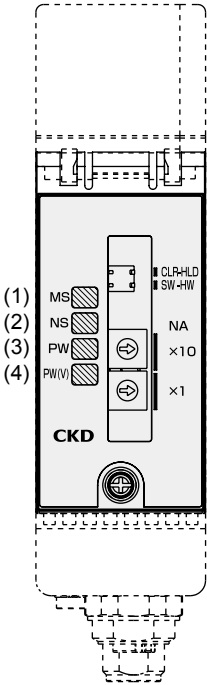
Wiring
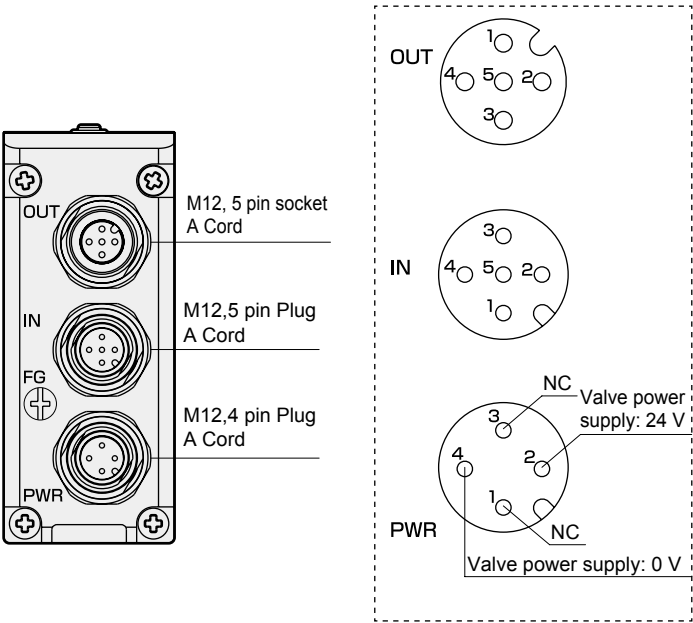
LED display description

LED	Name	Display description
(1)	MS	The status of the slave unit related to DeviceNet is indicated by the LED color (green/red) and state (ON/blinking)
(2)	NS	The status of the network related to DeviceNet is indicated by the LED color (green/red) and state (ON/blinking)
(3)	PW	Lights when communication power is ON. Green lamp is ON when normal
(4)	PW (V)	Lights when valve power is ON. Green lamp is ON when normal (Cannot be monitored when the communication power is not turned ON)

Communication connector pin array

Port	Pin	Signal name	Function
IN	1	Drain	Shield terminal
	2	V+	Communication power supply (+)
	3	V–	Communication power supply (-)
	4	CAN_H	Communication terminal (H)
	5	CAN_L	Communication terminal (L)
OUT	1	Drain	Shield terminal
	2	V+	Communication power supply (+)
	3	V–	Communication power supply (-)
	4	CAN_H	Communication terminal (H)
	5	CAN_L	Communication terminal (L)

Power supply connector pin array

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

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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 type * 　Ⓗ Station No. 　Ⓘ Voltage

* Not a DIN rail mount type.

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-T7D☐**																																
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 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   /

Date issued   /   /

Slip No.	Order No.

Company _____

● Manifold model No.

Contact _____

Order No. _____

MW4G ☐ 4 ☐ 0- [____] - [____] [____] [____] - [____] - [____]

Ⓐ Model No. Ⓑ Solenoid position Ⓒ Port size Ⓓ Wiring method * Ⓔ Terminal/ connector Pin array method Ⓕ 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-T7D[___]**																							
	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 T7EN (EtherNet/IP).

●Specifications are subject to change without notice.   © CKD Corporation 2017 All copy rights reserved.

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