MN4GB Series

How to fill out block manifold MN4G Series manifold specifications sheet

● Manifold model No. (example)

MN 4 GB1 8 0R - CX - T50 W H - 8 - 3

Ⓐ Model No. Ⓑ Solenoid position Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin array (Note: Fill in for reduced wiring.) Ⓕ Option Ⓖ Station No. Ⓗ Voltage

When filling in this field, select the model No. from "Block configurations" (pages 400 to 417).

Part name	Model No.	Layout position 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	Quantity
Wiring block (pages 406 and 407)	N4G1R-T 50	○																														1
With solenoid valve Valve block (page 402)	N4GB1 1 0R- C4 -		○	○																												2
	N4GB1 2 0R- C6 -					○																										1
	N4GB1 3 0R- C4 -				○																											1
	N4GB1 0R- -																															
	N4GB1 0R- -																															
	N4GB1 0R- -																															
	N3GB1 1 0R- C4 -									○	○	○																				3
	N3GB1 0R- -																															
Valve block with masking plate (Refer to page 402)	N4GB1R-MP																															
	N4GB1R-MPS																															
	N4GB1R-MPD						○																									1
Supply and exhaust block (page 404)	N4G1R-Q - 8L							○					○																			2
	N4G1R-Q -																															
	N4G1R-Q -																															
Partition block (page 405)	N4G1R-S A								○																							1
	N4G1R-S																															
	N4G1R-S																															
End block (page 405)	N4G1R-E R													○																		1
	N4G1R-E																															

Mounting rail	L_2 = (How to calculate length on next page)	Blanking plug						Silencer				Tag plate (included)		Included parts
		GWP4-B		GWP6-B		GWP8-B		SLW-H6		SLW-H8		A	○	
		Cable with D-sub-connector		4GR-CABLE-D0□-□				Push-in fitting tube remover (included as standard) ☑ Not required (check the box)						

* A circuit diagram of the above manifold model No. (example) is provided on the following page. Use for reference.

Place a check here if the tube remover (standard attachment) is not required.

Preparing manifold specifications sheet

● Complete from the left end, with the piping port facing forward.
(Fill in the block model No. selected from "Block configurations" (pages 400 to 417) and array directions.)
● Write the total number of blocks specified in the quantity field in the table far right.
● Mark a circle for required attachment parts.
● Indicate the mounting rail length. (Fill in only when a length other than the standard length is required.)
● As there are manifold specifications sheets for each of the various series, fill in the form for the corresponding specifications.
· MN4GB1: Page 429
· MN4GB2: Page 430
· MN4GBx1/2 (Mix manifold): Page 431

MN4GB Series

● Mounting rail model No.: N4GR-BAA Length

Mounting rail length (L2)

(1) Determine the rail length using the calculation method shown below. The obtained length is standard.
(2) For standard length, length (L2) is not required on the specifications sheet. Indicate the length when using a non-standard length.

● How to determine the length of the mounting rail

Manifold length (L1) = (A × Valve block Quantity) + (B × Supply and exhaust block Quantity) + (C × Partition block Quantity) + D (Wiring block) + E (Mixed block)

Mounting rail length (L2) = L2' × 12.5 A, B, C, D, and E indicate the length (width) of each block.

$$L2' : \frac{L1 + 40}{12.5} \rightarrow \text{decimals rounded up}$$

Rail mounting pitch (L3) = L2 - 12.5

Block length (width) dimensions table (mm)

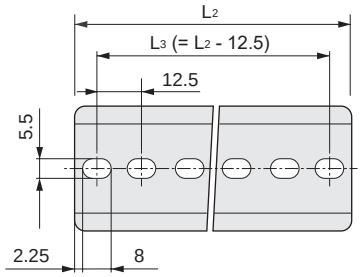
			MN4GB1	MN4GB2	MN4G1/2MIX	
					MN4GB1	MN4GB2
A	Valve block		10.5	16	10.5	16
B	Supply and exhaust block		16	18	16	18
C	Partition block		10.5	10.5	10.5	10.5
D	Individual wiring		41.2	46.2	43.7	
	Wiring block for reduced wiring	T10/T11	83.9	86.4	86.4	
		T10R/T11R	83.9	86.4	83.9	
		T30/T5*	69.4	71.9	71.9	
		T30R/T5*R	69.4	71.9	69.4	
		T6G1	143.6	146.1	146.1	
		T7*	64.4	66.9	66.9	
		T8*	64.4	66.9	66.9	
E	Mixed block				16	

* The end block is included in the wiring block.

● Mounting rail length quick reference table

L1: Manifold Length	47.5 or less	47.5 Over to 60 or less	60 to 72.5	72.5 to 85	85 to 97.5	97.5 to 110	110 to 122.5	122.5 to 135	135 to 147.5	147.5 to 160	160 to 172.5	172.5 to 185	185 to 197.5	197.5 to 210	210 to 222.5	222.5 to 235	235 to 247.5	247.5 to 260	260 to 272.5	272.5 to 285	285 to 297.5	297.5 to 310	310 to 322.5	322.5 to 335	335 to 347.5	347.5 to 360
L2: Rail Length	87.5	100	112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5	400
Pitch L3	75	87.5	100	112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5

*1: When L1 exceeds this table, calculate the length by referring to "How to calculate the length of the mounting rail".



MN4GB Series

How to fill out wiring specifications sheet

Not required for standard wiring and double wiring.

● Wiring specifications sheet (example)

* The following example has been filled out in accordance with the manifold specifications sheet on the previous page.

Connector pin No.				Valve No.																							
T50/T50R	**T51/T51R**	**T52/T52R**	**T53/T53R**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	1	1	**a**																							
2	2	2	2		**a**																						
3	3	3	3				**a**																				
4	4	4	4				**b**																				
5	5	5	5					**a**																			
6	6	6	6					**b**																			
7	7	7	7			**a**																					
8	8	8	8			**b**																					
9 - power supply	9	9 COM	9																								
10 + (COM) power supply	10	10 COM	10																								
11	11		11						**a**																		
12	12		12							**a**																	
13	13		13								**a**																
14	14		14																								
15	15		15																								
16	16		16																								
17	17		17																								
18	18		18																								
19 - power supply	19 COM		19																								
20 + (COM) power supply	20 COM		20																								
			21																								
			22																								
			23																								
			24																								
			25 COM																								
			26 COM																								

* Note that when the wiring method is T50/T50R, the COM polarity will be + (positive).

● Notes on wiring specifications

(1) Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. Consult with CKD, as products will be custom made in this case.

(2) The valve No. is determined by counting the valve blocks only in order from the left with the ports facing forward. Note that this differs from the installation position numbers.

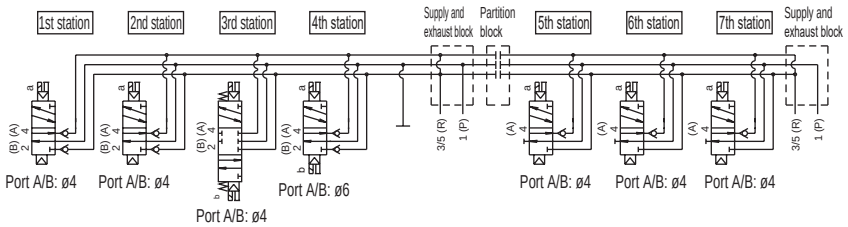
(3) As the connector pin No. and valve No. differ for each reduced wiring method (T1*/T30/T5*/T6G1/T7*/T8*), fill out the form upon reviewing the notes (pages 816 to 835) for each.

(4) Wiring (socket assembly) is included with valve blocks with masking plates. A side only for "-MPS". Both A and B sides for "-MPD".

(5) Double solenoids or 3-position solenoid valves cannot be assembled to "-MPS". Order valve block with solenoid valve and carry out expansion.

(6) It is not possible to install spare wires for station expansion in advance. Wire the socket assembly of the solenoid valve for expansion of stations. Refer to page 836 for instructions on how to expand stations.

Reference circuit diagram Simplified circuit diagram of manifold model No. (example) from previous page



* The manifold station numbers are set in order from the left with the piping port facing forward.
(Wiring blocks, supply and exhaust blocks, partition block, and end block are not included in the manifold station No.)

* Fill in the model No. selected from "Block configurations" (pages 400 to 417) and each specification model No. page.

* With piping port facing front, arrangement positions are set in order from the left.

MN4GB1 Block manifold specifications sheet

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

Slip No.	Order No.

Date issued / /

Company

Contact

Order No.

● Manifold model No.

MN4GB1 □ 0R - □ - □ □ □ - □ - □

Ⓐ Model No. Ⓑ Solenoid position Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin array (Note: Fill in for reduced wiring.) Ⓕ Option Ⓖ Station No. Ⓗ Voltage

When filling in this field, select the model No. from "Block configurations" (pages 400 to 417).

Part name (Page)	Model No.	Layout position 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	Quantity
Wiring block (pages 406 and 407)	N4G1R-T□																															
Valve block with solenoid valve (page 402)	N4GB1□0R-□-□																															
	N4GB1□0R-□-□																															
	N4GB1□0R-□-□																															
	N4GB1□0R-□-□																															
	N4GB1□0R-□-□																															
	N4GB1□0R-□-□																															
	N3GB1□0R-□-□																															
	N3GB1□0R-□-□																															
Valve block with masking plate (Refer to page 402)	N4GB1R-MP-□																															
	N4GB1R-MPS-□																															
	N4GB1R-MPD-□																															
Air supply spacer (page 410)	4G1R-P-□																															
	4G1R-P-□																															
Exhaust spacer (Refer to page 412)	4G1R-R-□																															
In-stop valve spacer Spacer (page 414)	4G1R-IS																															
Supply and exhaust block (Refer to page 404)	N4G1R-Q□-□																															
	N4G1R-Q□-□																															
	N4G1R-Q□-□																															
Partition block (Refer to page 405)	N4G1R-S□																															
	N4G1R-S□																															
	N4G1R-S□																															
End block (Refer to page 405)	N4G1R-E□																															
	N4G1R-E□																															

Mounting rail		Blanking plug				Silencer				Tag plate (included)				Included parts
	L₂ = □ * Write an integer multiple of 12.5. (How to determine the length: page 427)	PG-P2-B		GWP4-B		SLW-H6		SLW-H8		B1		B2		
		GWP6-B		GWP6-B										
		Cable with D-sub-connector		4GR-CABLE-D0□-□			Push-in fitting tube remover (included as standard) □ Not required (check the box)							

MN4GB2 Block manifold specifications sheet

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

Slip No. | Order No.

Date issued / /

Company

Contact

Order No.

● Manifold model No.

MN4GB2 □ 0R - □ - □ □ □ - □ - □

Ⓐ Model No. Ⓑ Solenoid position Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin array (Note: Fill in for reduced wiring.) Ⓕ Option Ⓖ Station No. Ⓗ Voltage

When filling in this field, select the model No. from "Block configurations" (pages 400 to 417).

Part name (Page)	Model No.	Layout position 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	Quantity
Wiring block (pages 406 and 407)	N4G2R-T□																															
Valve block with solenoid valve (page 402)	N4GB2□0R-□-□																															
	N4GB2□0R-□-□																															
	N4GB2□0R-□-□																															
	N4GB2□0R-□-□																															
	N4GB2□0R-□-□																															
	N4GB2□0R-□-□																															
	N3GB2□0R-□-□																															
	N3GB2□0R-□-□																															
Valve block with masking plate (Refer to page 402)	N4GB2R-MP-□																															
	N4GB2R-MPS-□																															
	N4GB2R-MPD-□																															
Air supply spacer (page 410)	4G2R-P-□																															
	4G2R-P-□																															
Exhaust spacer (Refer to page 412)	4G2R-R-□																															
In-stop valve spacer Spacer (page 414)	4G2R-IS																															
Spacer pilot check valve (Refer to page 415)	4G2R-PC-M																															
Supply and exhaust block (Refer to page 404)	N4G2R-Q□-□																															
	N4G2R-Q□-□																															
	N4G2R-Q□-□																															
Partition block (Refer to page 405)	N4G2R-S□																															
	N4G2R-S□																															
	N4G2R-S□																															
End block (Refer to page 405)	N4G2R-E□																															
	N4G2R-E□																															

Mounting rail	Blanking plug				Silencer		Tag plate (included)		Included parts
L_2= □	GWP4-B		GWP8-B		SLW-H8		B		
* Write an integer multiple of 12.5. (How to determine the length: page 427)	GWP6-B		GWP10-B		SLW-H10				
	Cable with D-sub-connector		4GR-CABLE-D0□-□						

MN4GB1/2 Mix manifold specifications sheet

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

Slip No.	Order No.

Date issued / /

Company

Contact

Order No.

● Manifold model No.

MN4GBX12R - □ - □ □ □ - □ - □

Ⓐ Model No. Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin array (Note: Fill in for reduced wiring.) Ⓕ Option Ⓖ Station No. Ⓗ Voltage

When filling in this field, select the model No. from "Block configurations" (pages 400 to 417).

Part name	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	
Wiring block (pages 406, 407)	N4G□R-T□																														
Valve block with solenoid valve (page 402)	N4GB□0R-□-□																														
	N4GB□0R-□-□																														
	N4GB□0R-□-□																														
	N4GB□0R-□-□																														
	N4GB□0R-□-□																														
	N4GB□0R-□-□																														
	N3GB□0R-□-□																														
	N3GB□0R-□-□																														
Valve block with masking plate (page 402)	N4GB□R-MP-□																														
	N4GB□R-MPS-□																														
	N4GB□R-MPD-□																														
Air supply spacer (page 410)	4G1R-P-□																														
	4G2R-P-□																														
Exhaust spacer (Refer to page 412)	4G2R-R-□																														
In-stop valve spacer (page 414)	4G2R-IS																														
Mixed block (Refer to page 405)	N4G12R-MIX																														
Supply and exhaust block (page 404)	N4G□R-Q□-□																														
	N4G□R-Q□-□																														
	N4G□R-Q□-□																														
Partition block (page 405)	N4G□R-S□																														
	N4G□R-S□																														
	N4G□R-S□																														
End block (page 405)	N4G□R-E□																														
	N4G□R-E□																														

Mounting rail	L_2 = □ * Write an integer multiple of 12.5. (How to determine the length: page 427)	Blanking plug						Silencer				Included parts
		PG-P2-B		GWP□-B		GWP□-B		SLW-H□		SLW-H□		
		GWP□-B		GWP□-B								
		Cable with D-sub-connector		4GR-CABLE-D0□-□		Push-in fitting tube remover (included as standard) □ Not required (check the box)						

Common terminal block (T10/T11) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
* Not required with standard wiring/double wiring.

Connector pin No.		Valve No.																							
T10 ☐	**T11** ☐	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1																								
2	2																								
3	3																								
4	4																								
5	5																								
6	6																								
7	7																								
8	8																								
9	9																								
10	10																								
11	11																								
12	12																								
13	13																								
14	14																								
15	15																								
16	16																								
COM	17																								
COM	18																								
	19																								
	20																								
	21																								
	22																								
	23																								
	24																								
	COM																								
	COM																								

D-sub-connector (T30) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
* Not required with standard wiring/double wiring.

Connector pin No.	Valve No.																								
T30 ☐	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1																								
14																								
2																								
15																								
3																								
16																								
4																								
17																								
5																								
18																								
6																								
19																								
7																								
20																								
8																								
21																								
9																								
22																								
10																								
23																								
11																								
24																								
12																								
25																								
13 (COM)																								

Flat cable connector (T50/T51/T52/T53) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
* Not required with standard wiring/double wiring.

Connector pin No.				Valve No.																							
T50 ☐	**T51** ☐	**T52** ☐	**T53** ☐	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	1	1																								
2	2	2	2																								
3	3	3	3																								
4	4	4	4																								
5	5	5	5																								
6	6	6	6																								
7	7	7	7																								
8	8	8	8																								
9 - power supply	9	9 COM	9																								
10 + (COM) power supply	10	10 COM	10																								
11	11		11																								
12	12		12																								
13	13		13																								
14	14		14																								
15	15		15																								
16	16		16																								
17	17		17																								
18	18		18																								
19 - power supply	19 COM		19																								
20 + (COM) power supply	20 COM		20																								
			21																								
			22																								
			23																								
			24																								
			25 COM																								
			26 COM																								

* Note that when the wiring method is T50/T50R, the COM polarity will be + (positive).

Serial transmission (T6G1/T7*) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
* Not required with standard wiring/double wiring.

Serial transmission	Connector pin No.		Valve No.															
	T6G1	**T7***	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Connector type T6G1: CC-Link 16 points	1	1																
	2	2																
	3	3																
	4	4																
	5	5																
	6	6																
	7	7																
	8	8																
	9	9																
	10 COM	10																
	11	11																
	12	12																
Thin slot-insertion type T7D1: DeviceNet 16 points T7G1: CC-Link 16 points T7L1: SAVE NET 16 points T7S1: CompoNet 16 points (NPN) T7SP1: CompoNet 16 points (PNP)	13	13																
	14	14																
	15	15																
	16	16																
	17	17																
	18	18																
	19	19																
	20 COM	20																

Serial transmission (T8*) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
* Not required with standard wiring/double wiring.

Serial transmission			
T8G1	CC-Link	NPN	16 points
T8G2			32 points
T8GP1		PNP	16 points
T8GP2			32 points
T8P1	PROFIBUS-DP	NPN	16 points
T8P2			32 points
T8PP1		PNP	16 points
T8PP2			32 points
T8EC1	EtherCAT	NPN	16 points
T8EC2			32 points
T8ECP1		PNP	16 points
T8ECP2			32 points
T8EN1	EtherNet/IP	NPN	16 points
T8EN2			32 points
T8ENP1		PNP	16 points
T8ENP2			32 points
T8D1	DeviceNet	NPN	16 points
T8D2			32 points
T8DP1		PNP	16 points
T8DP2			32 points
T8EB1	CC-Link IEF Basic	NPN	16 points
T8EB2			32 points
T8EBP1		PNP	16 points
T8EBP2			32 points
T8EP1	PROFINET	NPN	16 points
T8EP2			32 points
T8EPP1		PNP	16 points
T8EPP2			32 points

Connector pin No.	Valve No.																							
T8*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
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