PNP TRANSISTOR OUTPUT MODULE
(with short circuit protection; 32 points)

MODEL **R8-DCM32B2**

BEFORE USE ....

Thank you for choosing M-System. Before use, check the contents of the package you received as below.
If you have any problems or questions with the product, please contact M-System's Sales Office or representatives.

■ PACKAGE INCLUDES:
PNP transistor output module ....(1)

■ MODEL NO.
Confirm that the model number described on the product is exactly what you ordered.

■ INSTRUCTION MANUAL
This manual describes necessary points of caution when you use this product, including installation, connection and basic maintenance procedures.

POINTS OF CAUTION

■ CONFORMITY WITH EU DIRECTIVES
• The equipment must be mounted inside a panel.
• The actual installation environments such as panel configurations, connected devices and connected wires may affect the protection level of this unit when it is integrated in a panel system. The user may have to review the CE requirements in regard to the whole system and employ additional protective measures to ensure CE conformity.

■ GENERAL PRECAUTIONS
• Before you remove or mount the unit, turn off the power supply and output signal for safety.
• Switches on the side of the module can be set for maintenance only while the power supply is off. Do not access them while the power is supplied.

■ ENVIRONMENT
• Indoor use
• When heavy dust or metal particles are present in the air, install the unit inside proper housing with sufficient ventilation.
• Do not install the unit where it is subjected to continuous vibration. Do not apply physical impact to the unit.
• Environmental temperature must be within -10 to +55°C (14 to 131°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.

■ WIRING
• Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
• Do not bind these cables together with those in which noises are present. Do not install them in the same duct.
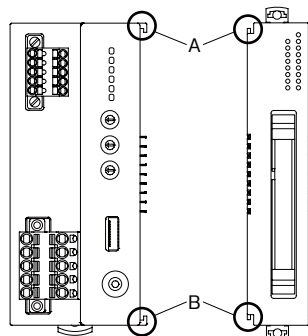
■ AND ....
• The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.
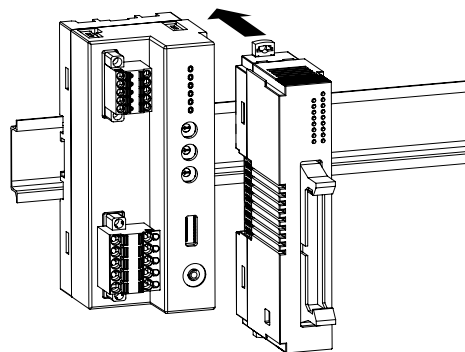
INSTALLATION

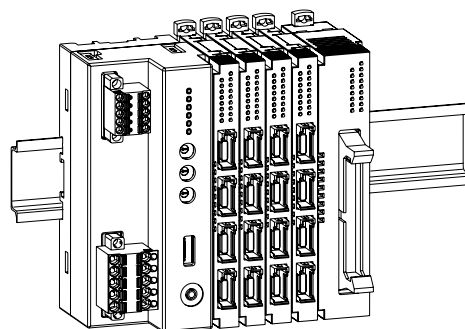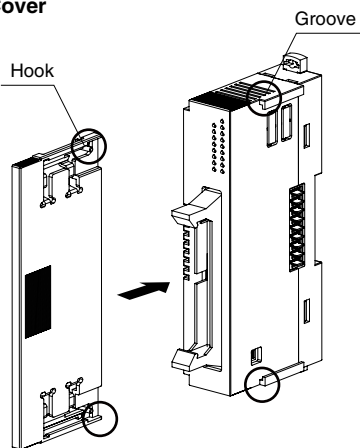### ■ HOW TO MOUNT THE MODULE ON DIN RAIL

• **I/O Module**

Confirm that the locking clamps of the I/O module are set.
Insert the module in parallel to the next one while aligning the grooves of both modules (A & B in the above figure).
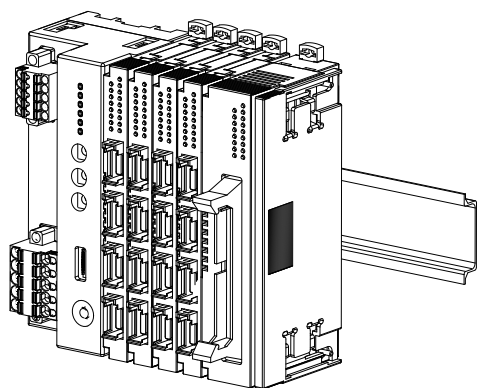Maintain it perpendicularly to the rail.

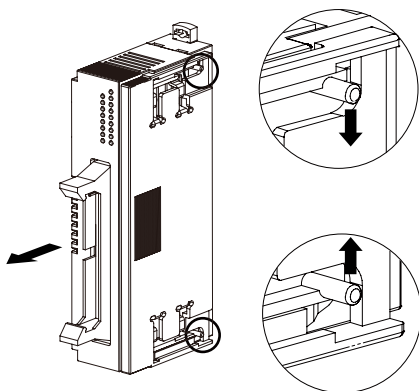More I/O modules can be added in the same manner.

• Protective Cover

Groove

Hook

The protective cover is to be attached over the connected I/O module at the right end.
Align the hooks on the cover with the grooves of the module and slide it straight until the hooks are latched.
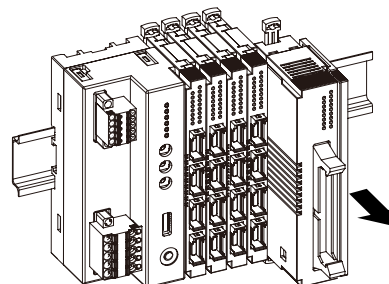

When removing the cover, pull it out while squeezing the hooks inward.

■ HOW TO UNMOUNT THE MODULE FROM DIN RAIL

Release the locking clamps and pull out straight the module.
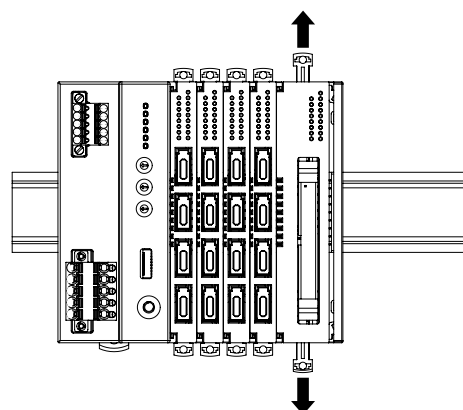
• Removing an intermediate module
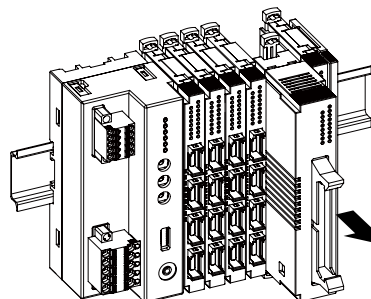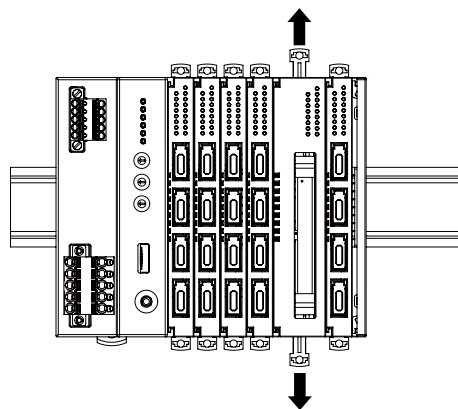
Caution !
1) Be careful not to hurt your hand by pointed edges of the internal communication bus connector.
2) I/O modules cannot hold tightly on the DIN rail by themselves without power/network module.
   Secure them to the position if necessary by using DIN rail end plates.

COMPONENT IDENTIFICATION

■ **FRONT VIEW**

■ **SIDE VIEW**

■ **INDICATOR LED**

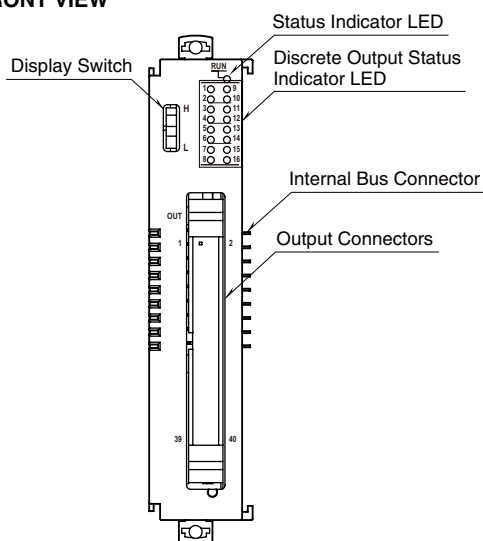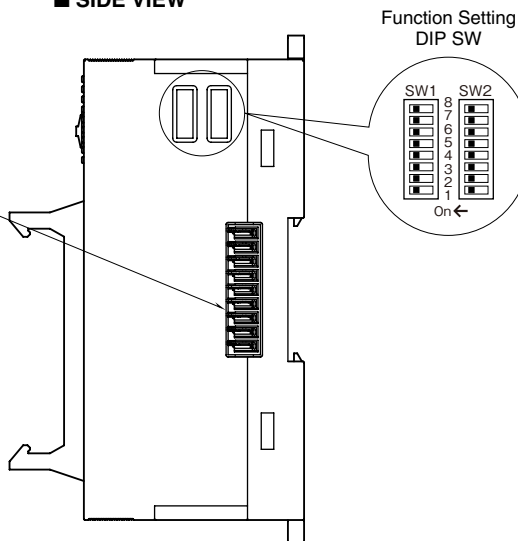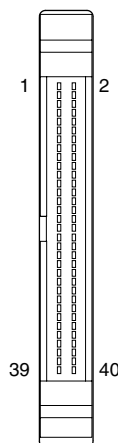| LED	OPERATION	FUNCTION
Status	OFF	Stopping
	Green ON	Valid host communication
	Green Blinking	Reading/writing configuration
	Red ON	Setting error
	Red Blinking	Parameter error
Output Status	OFF	OFF
	Green ON	ON

■ **DISPLAY SWITCH**

L	Do 1 to Do 16
H	Do 17 to Do 32

L : LED No.1 corresponds Do 1.
H : LED No.1 corresponds Do 17.

■ **OUTPUT CONNECTOR ASSIGNMENT**

PIN No.	ID	FUNCTION
1	Do1	Output 1
2	Do2	Output 2
3	Do3	Output 3
4	Do4	Output 4
5	Do5	Output 5
6	Do6	Output 6
7	Do7	Output 7
8	Do8	Output 8
9	Do9	Output 9
10	Do10	Output 10
11	Do11	Output 11
12	Do12	Output 12
13	Do13	Output 13
14	Do14	Output 14
15	Do15	Output 15
16	Do16	Output 16
17	Do17	Output 17
18	Do18	Output 18
19	Do19	Output 19
20	Do20	Output 20
21	Do 21	Output 21
22	Do 22	Output 22
23	Do 23	Output 23
24	Do 24	Output 24
25	Do 25	Output 25
26	Do 26	Output 26
27	Do 27	Output 27
28	Do 28	Output 28
29	Do 29	Output 29
30	Do 30	Output 30
31	Do 31	Output 31
32	Do 32	Output 32
33, 34	0V	Excitation supply 0V
35, 36		
37, 38		
39, 40		

■ **MODULE ADDRESS**

Module address can be set with SW1-1 through 1-4 for the tens, and SW1-5 through 1-8 for the ones place digit. Address is selected between 0 to 30. (Factory setting: 0)

MODULE ADDRESS	SW1			
	1 5	2 6	3 7	4 8
0	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	ON
2	OFF	OFF	ON	OFF
3	OFF	OFF	ON	ON
4	OFF	ON	OFF	OFF
5	OFF	ON	OFF	ON
6	OFF	ON	ON	OFF
7	OFF	ON	ON	ON
8	ON	OFF	OFF	OFF
9	ON	OFF	OFF	ON

■ **OPERATING MODE**

*Factory setting

• **Output at The Loss of Communication**

OUTPUT AT THE LOSS OF COMMUNICATION	SW2-5
Output Hold (*) (last data correctly rerceived is hold)	OFF
Stop output (Output fixed at OFF)	ON

• **Configuration Mode**

CONFIGURATION MODE	SW2-8
DIP switch setting (*)	OFF
PC Configurator and communicaton	ON

• **Terminator DIP SW**

TERMINATOR SW	SW2-6
Without (*)	OFF
With	ON

Note: Be sure to set unused SW2-1 through 2-4, SW2-7 to OFF.

■ **PC CONFIGURATOR**

The following parameters can be set with using PC Configurator Software (model: R8CFG):
• Output at the startup
• Output at the loss of communication
• Common setting (loss of internal bus communication detection time)
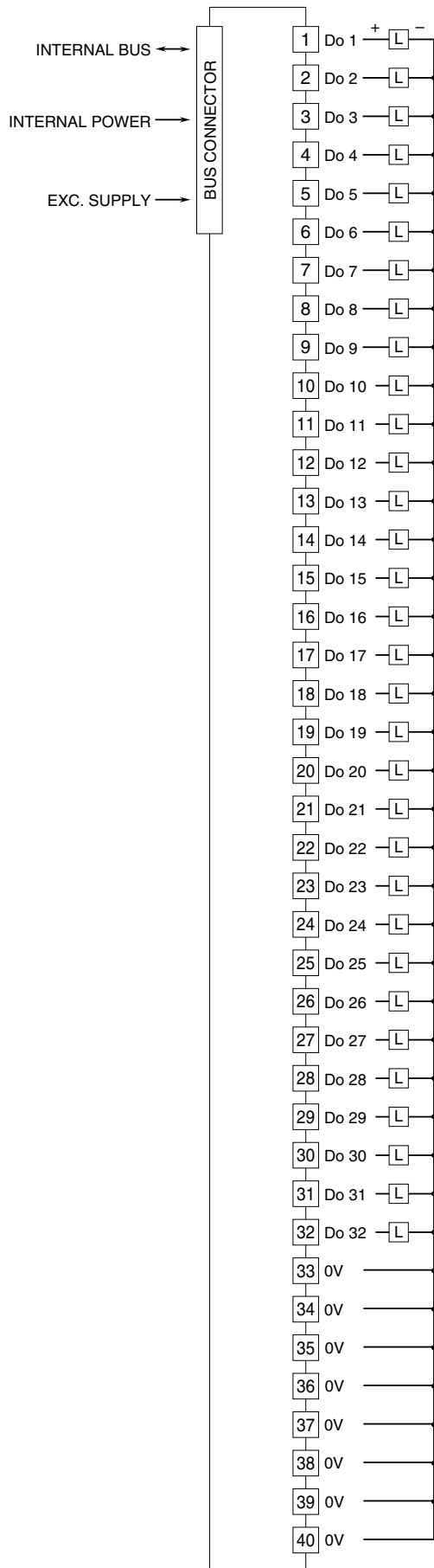Turn SW2-8 ON to allow programming by the PC Configurator via the Power/Network Module.
Refer to the users manual for the R8CFG for detailed operation of the software program.

EXTERNAL DIMENSIONS unit: mm (inch)

CONNECTION DIAGRAM

INTERNAL BUS

INTERNAL POWER

EXC. SUPPLY

BUS CONNECTOR

1	Do 1	+ L −
2	Do 2	L
3	Do 3	L
4	Do 4	L
5	Do 5	L
6	Do 6	L
7	Do 7	L
8	Do 8	L
9	Do 9	L
10	Do 10	L
11	Do 11	L
12	Do 12	L
13	Do 13	L
14	Do 14	L
15	Do 15	L
16	Do 16	L
17	Do 17	L
18	Do 18	L
19	Do 19	L
20	Do 20	L
21	Do 21	L
22	Do 22	L
23	Do 23	L
24	Do 24	L
25	Do 25	L
26	Do 26	L
27	Do 27	L
28	Do 28	L
29	Do 29	L
30	Do 30	L
31	Do 31	L
32	Do 32	L
33	0V	
34	0V	
35	0V	
36	0V	
37	0V	
38	0V	
39	0V	
40	0V	
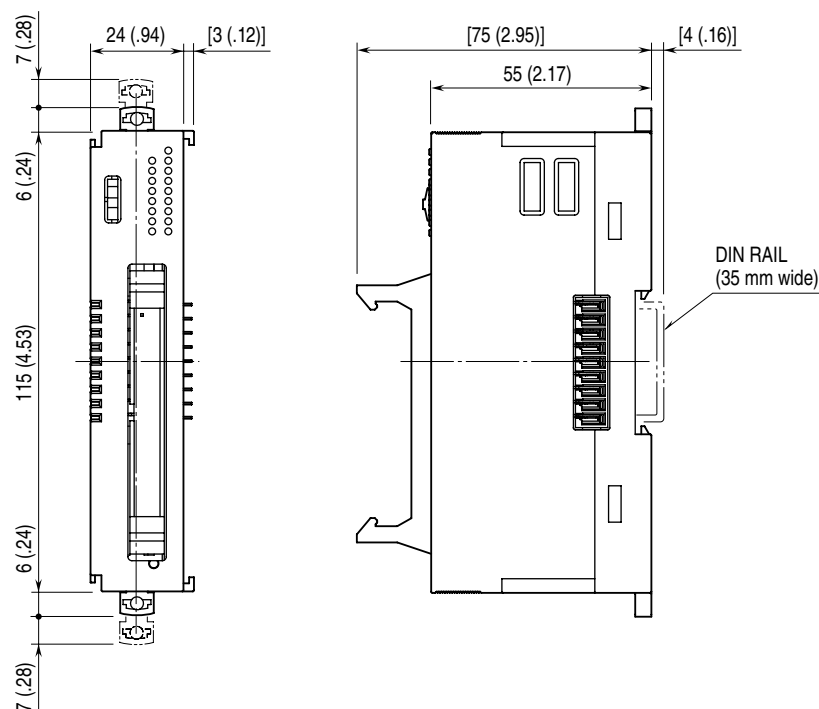
WIRING INSTRUCTIONS

■ **MIL connector**

PWB connector: XG4A-4034 (Omron)

Recommended socket XG5N-401 (Omron)[1]

Recommended contact XG5W-0231 (Omron)[1]

Applicable wire size: AWG22, 17 strands, (0.16 dia)

[1]. Not included in the package. Refer to the specifications of the product.