INSTRUCTION MANUAL

DIGITAL INPUT MODULE
(8 points, non-isolated)

MODEL **R8-DAHVT8N2**

BEFORE USE ....

Thank you for choosing us. Before use, please check contents of the package you received as outlined below.
If you have any problems or questions with the product, please contact our sales office or representatives.

This product is for use in general industrial environments, therefore may not be suitable for applications which require higher level of safety (e.g. safety or accident prevention systems) or of reliability (e.g. vehicle control or combustion control systems).
For safety, installation and maintenance of this product must be conducted by qualified personnel.

■ PACKAGE INCLUDES:

Digital input module.....(1)

■ MODEL NO.

Confirm Model No. marking on the product to be 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.

■ SYMBOLS USED ON THE PRODUCT AND IN THIS MANUAL

⚠ The symbol indicated on the equipment, means that the user must refer to the related parts in the manual for safe operation of the equipment. It is essential to read the instructions wherever the symbol appears in the manual.

⚠ **WARNING**: is reserved for conditions and actions that can cause serious or fatal injury.
⚠ **CAUTION**: is reserved for conditions and actions that can cause injury or instrument damage.

⚠ CAUTION

■ REGARDING SAFETY

- If the module is used in a manner not specified by this manual, the protection provided by the module may be impaired.

■ CONFORMITY WITH EU DIRECTIVES

- This equipment is suitable for Measurement Category II (input, transient voltage 2500V), Pollution Degree 2.
  And insulation class of this unit is as following.
  Input to exc. supply or internal bus or internal power: Reinforced insulation (300V)
  Prior to installation, check that the insulation class of this unit satisfies the system requirements.
- The equipment must be mounted inside a panel.
- Altitude up to 2000 meters.
- The equipment must be installed such that appropriate clearance and creepage distances are maintained to conform to CE requirements. Failure to observe these requirements may invalidate the CE conformance.
- The actual installation environments such as panel configurations, connected devices, 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 the CE conformity.
  * For example, installation of noise filters and clamp filters for the power source, input and output connected to the unit, etc.

■ POWER REQUIREMENTS

- The equipment receives power through the internal power and confirms its operational range as indicated below:
  Internal Power: 5 V DC, ≤ 160 mA

POINTS OF CAUTION

■ GENERAL PRECAUTION

- Before you remove the unit or mount it, turn off the power supply and input signal for safety
- Do not touch the connector while the power is supplied. Static electricity may cause a malfunction.
- Switches on the side of the unit 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 subject the unit to physical impact.
- 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.

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INPUT SPECIFICATIONS

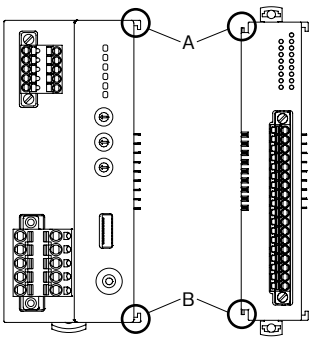
Frequency: 50 / 60 Hz (45 – 66 Hz)

• AC voltage
100 V AC: Rating 100 to 120 V AC
200 V AC: Rating 200 to 240 V AC

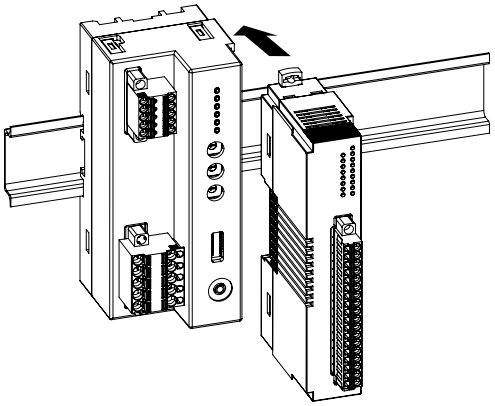
• DC voltage
100 V DC: Rating 100 to 120 V DC
200 V DC: Rating 200 to 240 V DC

INSTALLATION

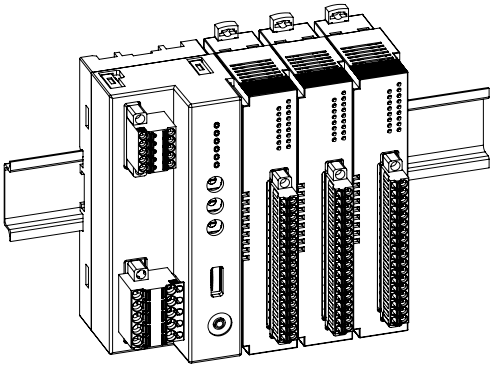
• I/O Module



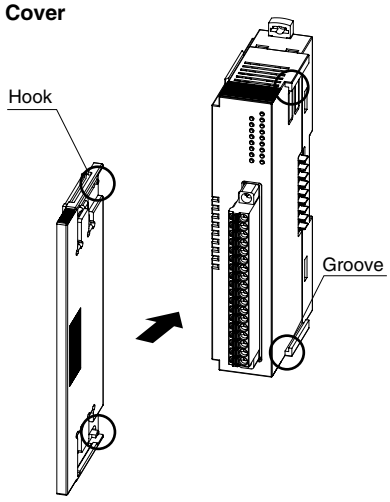
Confirm that the locking clamps of the I/O module are set.
Insert the module in parallel to the next one while aligning the grooves of both modules (A & B in the above figure).
Maintain it perpendicularly to the rail.



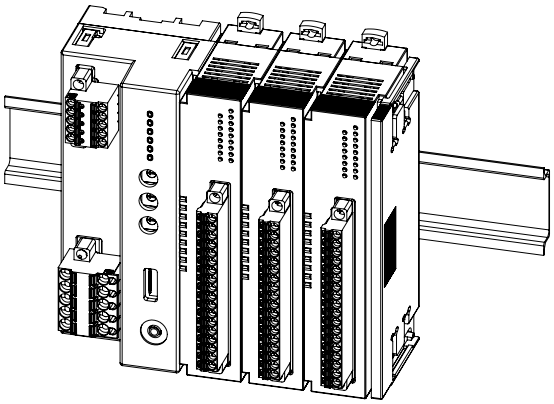
More I/O modules can be added in the same manner.



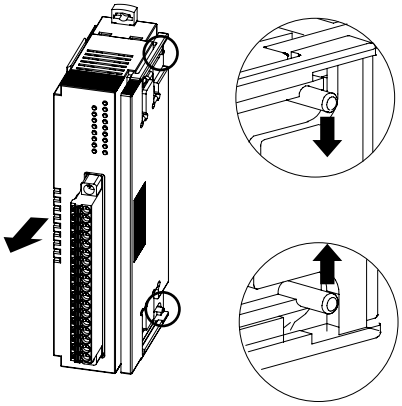
• Protective Cover



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.

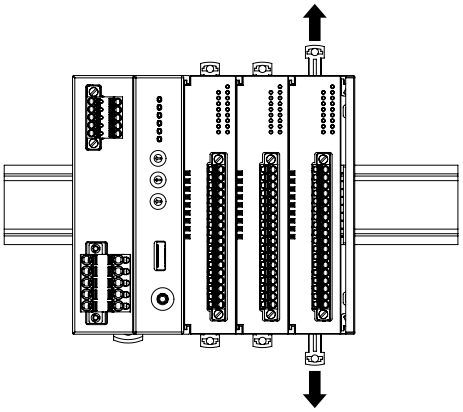


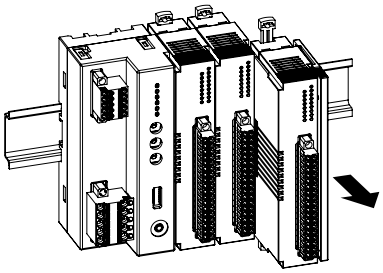
When removing the cover, pull it out while squeezing the hooks inward.



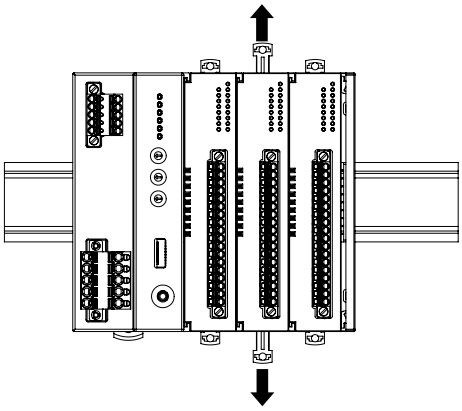
■ HOW TO UNMOUNT THE MODULE FROM DIN RAIL

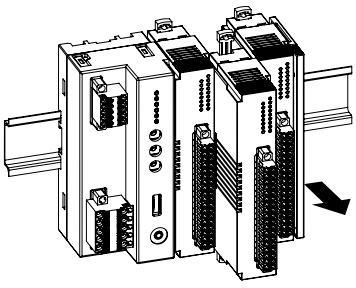
Release the locking clamps and pull out straight the module.





• Removing an intermediate module





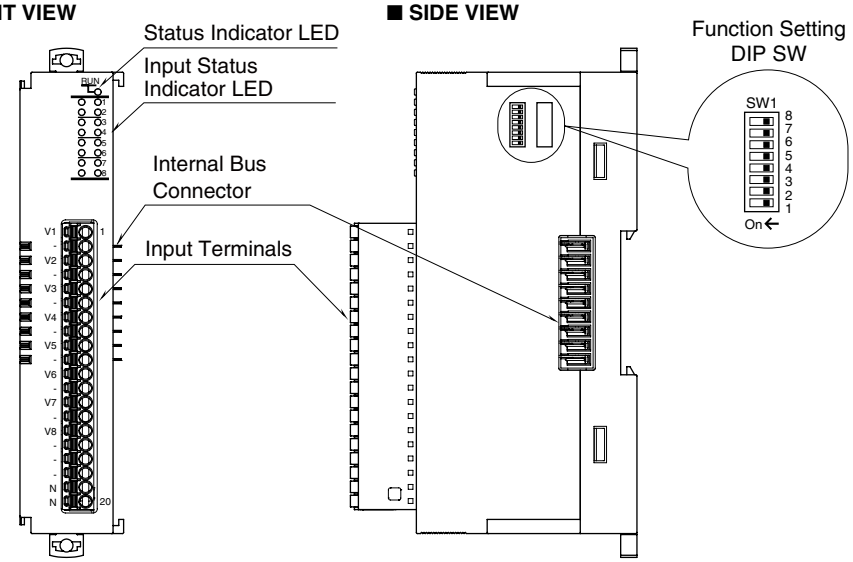
Caution !

1) Be careful not to hurt your hand by pointed edges of the internal 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

ID	OPERATION	FUNCTION
Status	OFF	Stopping
	Green ON	Valid host communication
	Green Blinking	Reading/writing configuration
	Red ON	Setting error
	Red Blinking	Parameter error
Input Status	OFF	No input
	Green ON	Receiving input

■ MODULE ADDRESS: SW1-1 to SW1-6

The SW1-1 and SW1-2 determine the tenth place digit, while the SW1-3, SW1-4, SW1-5 and SW1-6 do the ones place digit of the address.
Address is selected between 0 to 24.
(Factory setting: 0)

MODULE ADDRESS	SW1			
	×10			1	2
	×1	3	4	5	6
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

■ TERMINATOR DIP SW: SW1-8

(*) Factory setting

TERMINATOR DIP SW	SW1-8
Without (*)	OFF
With	ON

Note: Be sure to set unused SW1-7 to OFF.

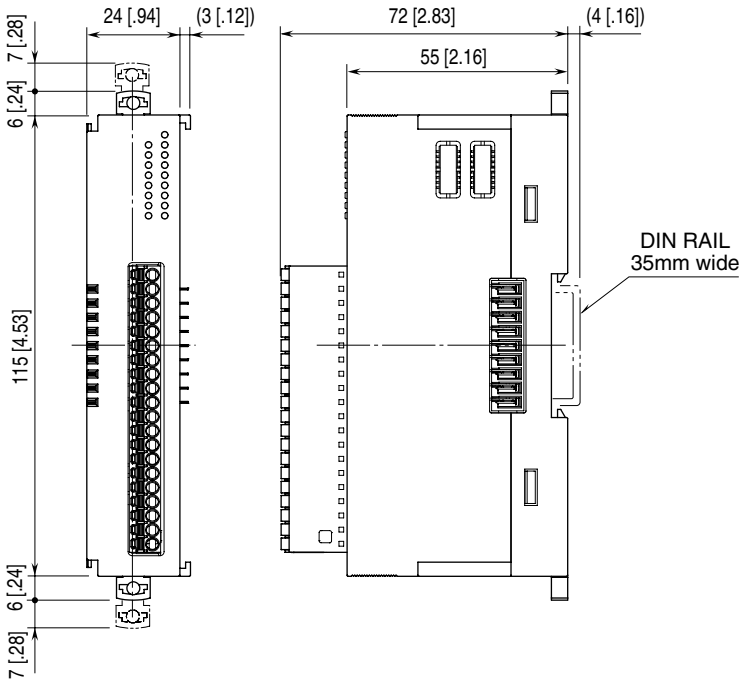
PC CONFIGURATOR

Configuration by the PC is required for each setting.
Refer to the users manual for the R8CFG for detailed operation of the software program.

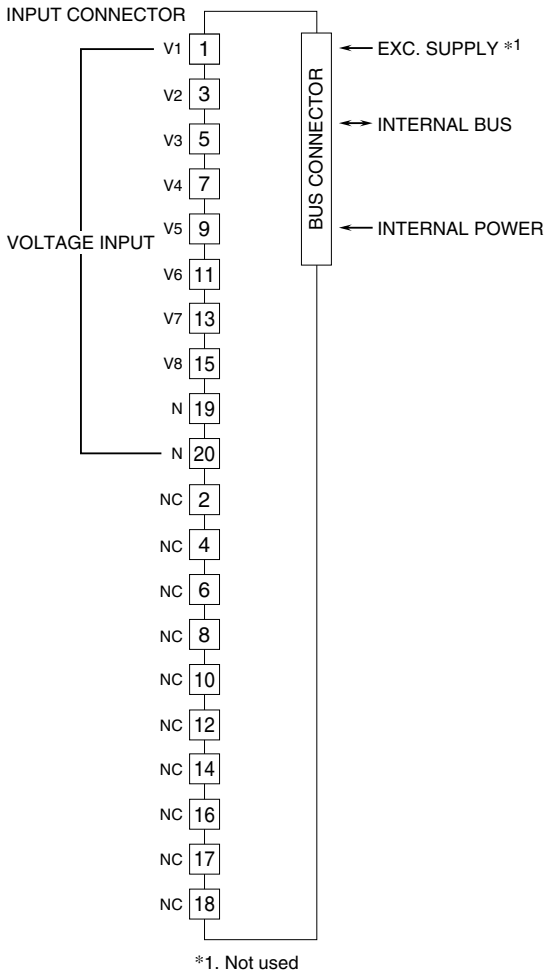
TERMINAL CONNECTIONS

Connect the unit as in the diagrams below.

■ EXTERNAL DIMENSIONS unit: mm [inch]



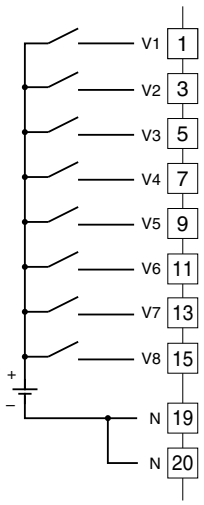
■ CONNECTION DIAGRAM



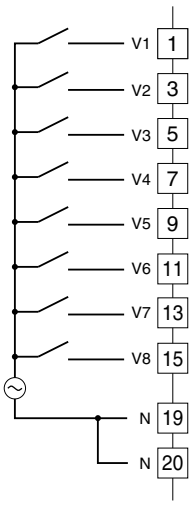
*1. Not used

■ Input Connection Examples

• DC voltage



• AC voltage



WIRING INSTRUCTIONS

■ **TENSION CLAMP TERMINAL**

Applicable wire size: 0.2 – 1.5 mm^2
Stripped length: 10 mm