

CC-Link I/O MODULE

(NPN discrete output, 32 points, FCN connector)

MODEL R7F4HC-DC32A-K

BEFORE USE

Thank you for choosing M-System. 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 M-System's Sales Office or representatives.

■ PACKAGE INCLUDES:

Discrete output module.....(1)
DIN rail mouser slider.....(2)

■ 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.

■ CSP+ file

CSP+ file is downloadable at M-System's web site (<https://www.m--system.co.jp>) or CC-Link Partner Association's web site (<https://www.cc-link.org>).

POINTS OF CAUTION

■ CONFORMITY WITH EU DIRECTIVES

- The equipment must be mounted inside the instrument panel of a metal enclosure.
- 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 INPUT RATING & OPERATIONAL RANGE

- Locate the power input rating marked on the product and confirm its operational range as indicated below:
24V DC rating: 24V \pm 10%, \leq 60 mA

■ GENERAL PRECAUTIONS

- Before you remove the unit or mount it, turn off the power supply and output signal for safety.
- Before you remove the connector or mount it, make sure to turn off the power supply and output signal for safety.
- DO NOT set the switches on the module while the power is supplied. The switches are used only for maintenance without the power.

■ 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.
- With vertical mounting, for heat dissipation leave at least 10 mm (.39 in.) at the both side of the unit.

■ WIRING

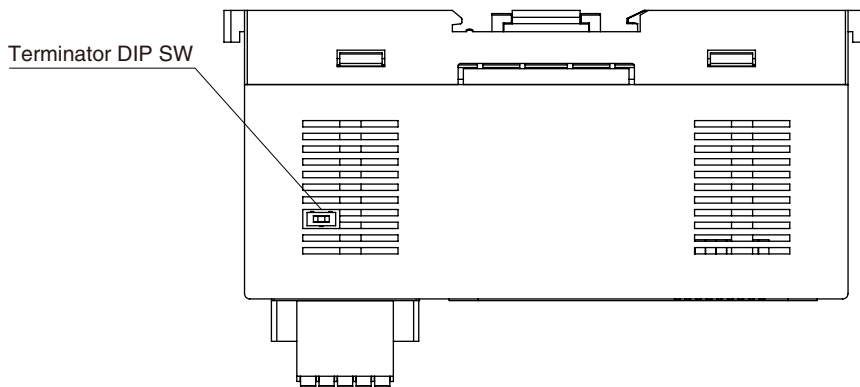
- Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

■ AND

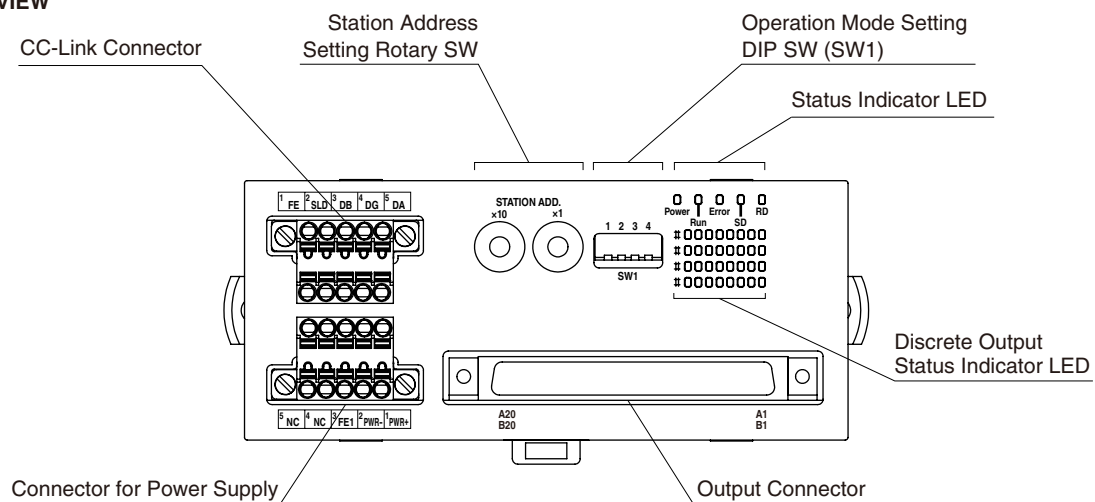
- The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

COMPONENT IDENTIFICATION

■ TOP VIEW



■ FRONT VIEW



■ STATUS INDICATOR LED

| ID | STATUS | COLOR | FUNCTION |
|-------|--------|-------|--|
| Power | ON | Green | Internal 5V power is in normal status. |
| Run | ON | Green | The refresh data is received normally |
| Error | ON | Red | The received data is abnormal. |
| SD | ON | Green | The module is transmitting. |
| RD | ON | Green | The module is receiving. |

■ DISCRETE OUTPUT STATUS INDICATOR LED

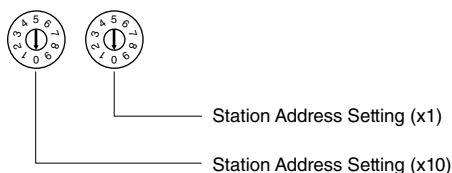
Green LED shows the output status.

ON : LED ON
OFF : LED OFF

■ STATION ADDRESS

The left switch determines the tenth place digit, while the right one does the ones place digit of the station address (1 - 64).

(Factory setting: 00)



■ OPERATING MODE

(*) Factory setting

• Read Rate (SW1-1, 1-2, 1-3)

| BAUD RATE | SW1 | | |
|-----------------|-----|-----|-----|
| | 1 | 2 | 3 |
| 0: 156 kbps (*) | OFF | OFF | OFF |
| 1: 625 kbps | ON | OFF | OFF |
| 2: 2.5 Mbps | OFF | ON | OFF |
| 3: 5 Mbps | ON | ON | OFF |
| 4: 10 Mbps | OFF | OFF | ON |

• OUTPUT AT THE LOSS OF COMMUNICATION (SW1-4)

| OUTPUT AT THE LOSS OF COMMUNICATION | SW1 |
|--|---------------------------|
| | Output clear (output OFF) |
| Hold the output (*) (maintains the last data received normally) | OFF |
| | ON |

■ TERMINATING RESISTOR

To use the terminating resistor, turn the switch ON, and OFF to invalidate. (Factory setting OFF)

■CC-Link, POWER SUPPLY ASSIGNMENT

Unit side connector: MC1,5/5-GF-3,5 (Phoenix Contact)

Cable side connector: TFMC1,5/5-STF-3,5 (Phoenix Contact)

Applicable wire size: 0.2 - 1.5mm², stripped length 10mm

A10,25-10YE 0.25mm² (Phoenix Contact)

A0,34-10TQ 0.34mm² (Phoenix Contact)

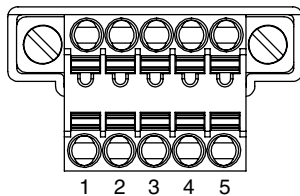
A10,5-10WH 0.5mm² (Phoenix Contact)

A10,75-10GY 0.75mm² (Phoenix Contact)

A11-10 1.0mm² (Phoenix Contact)

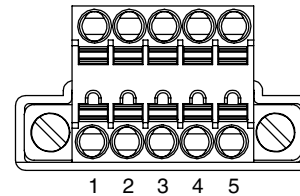
A11,5-10 1.5mm² (Phoenix Contact)

· CC-Link



| NO. | ID | FUNCTION |
|-----|-----|------------------|
| 1 | FE | Functional earth |
| 2 | SLD | Shield |
| 3 | DB | DB (white) |
| 4 | DG | DG (yellow) |
| 5 | DA | DA (blue) |

· POWER SUPPLY



| NO. | ID | FUNCTION |
|-----|------|----------------|
| 1 | PWR+ | Power supply + |
| 2 | PWR- | Power supply - |
| 3 | FE1 | Grounding |
| 4 | NC | Unused |
| 5 | NC | Unused |

Note: The numbers marked on the connector have no relationship to the pin number of the unit.

Wire according to the instruction manual of the unit.

■ OUTPUT, SENSOR EXC. ASSIGNMENT

Unit side connector: N365P040AU (OTAX) (FCN-365P040-AU (Fujitsu)...discontinued)

Cable side connector: N36()J040AU(OTAX) (FCN-36()J040-AU (Fujitsu)...discontinued)

(The cable connector is not included in the package. Specify wire size instead of (); refer to the specifications of the product)



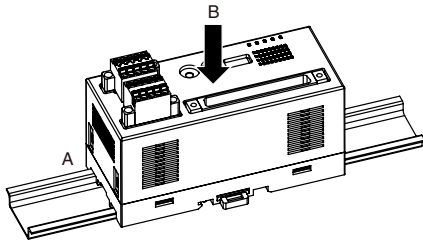
| PIN NO. | ID | FUNCTION | PIN NO. | ID | FUNCTION |
|---------|-----|---------------|---------|-----|---------------|
| A1 | VS- | Exc. supply - | B1 | VS+ | Exc. supply + |
| A2 | VS- | Exc. supply - | B2 | VS+ | Exc. supply + |
| A3 | NC | Unused | B3 | NC | Unused |
| A4 | NC | Unused | B4 | NC | Unused |
| A5 | Y31 | Output 31 | B5 | Y15 | Output 15 |
| A6 | Y30 | Output 30 | B6 | Y14 | Output 14 |
| A7 | Y29 | Output 29 | B7 | Y13 | Output 13 |
| A8 | Y28 | Output 28 | B8 | Y12 | Output 12 |
| A9 | Y27 | Output 27 | B9 | Y11 | Output 11 |
| A10 | Y26 | Output 26 | B10 | Y10 | Output 10 |
| A11 | Y25 | Output 25 | B11 | Y9 | Output 9 |
| A12 | Y24 | Output 24 | B12 | Y8 | Output 8 |
| A13 | Y23 | Output 23 | B13 | Y7 | Output 7 |
| A14 | Y22 | Output 22 | B14 | Y6 | Output 6 |
| A15 | Y21 | Output 21 | B15 | Y5 | Output 5 |
| A16 | Y20 | Output 20 | B16 | Y4 | Output 4 |
| A17 | Y19 | Output 19 | B17 | Y3 | Output 3 |
| A18 | Y18 | Output 18 | B18 | Y2 | Output 2 |
| A19 | Y17 | Output 17 | B19 | Y1 | Output 1 |
| A20 | Y16 | Output 16 | B20 | Y0 | Output 0 |

MOUNTING INSTRUCTIONS

■ DIN RAIL MOUNTING (PARALLEL)

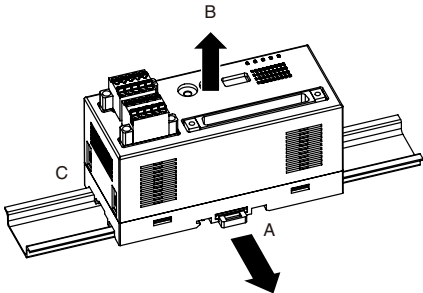
• Mounting

- A) Set the upper hook at the rear side of the unit on the DIN rail.
- B) Push in the lower.



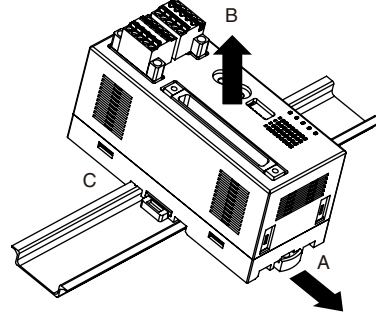
• Dismounting

- A) Push down the DIN rail mounter slider with tip of a minus screwdriver.
- B) Pull the lower of the unit.
- C) Remove the upper hook of the unit from the DIN rail.



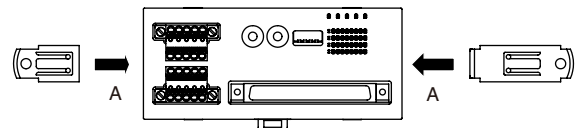
• Dismounting

- A) Push down the DIN rail mounter slider with tip of a minus screwdriver.
- B) Pull the lower of the unit.
- C) Remove the upper hook of the unit from the DIN rail.

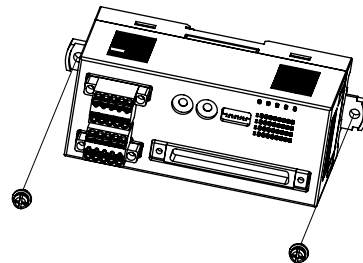


■ SURFACE MOUNTING

- A) Insert the two DIN rail mounter sliders until it clicks once, as shown below.



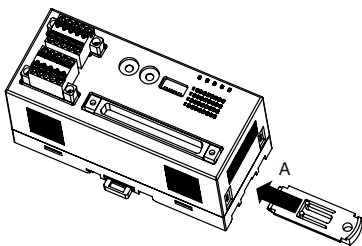
- B) Mount the unit with M4 screws referring the External Dimensions. (Torque: 1.4 N·m)



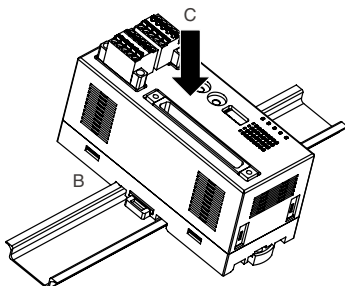
■ DIN RAIL MOUNTING (RIGHT ANGLE)

• Mounting

- A) Insert the longer DIN rail mounter slider until it clicks twice, as shown below.



- B) Set the upper hook at the rear side of the unit on the DIN rail.
- C) Push in the lower.

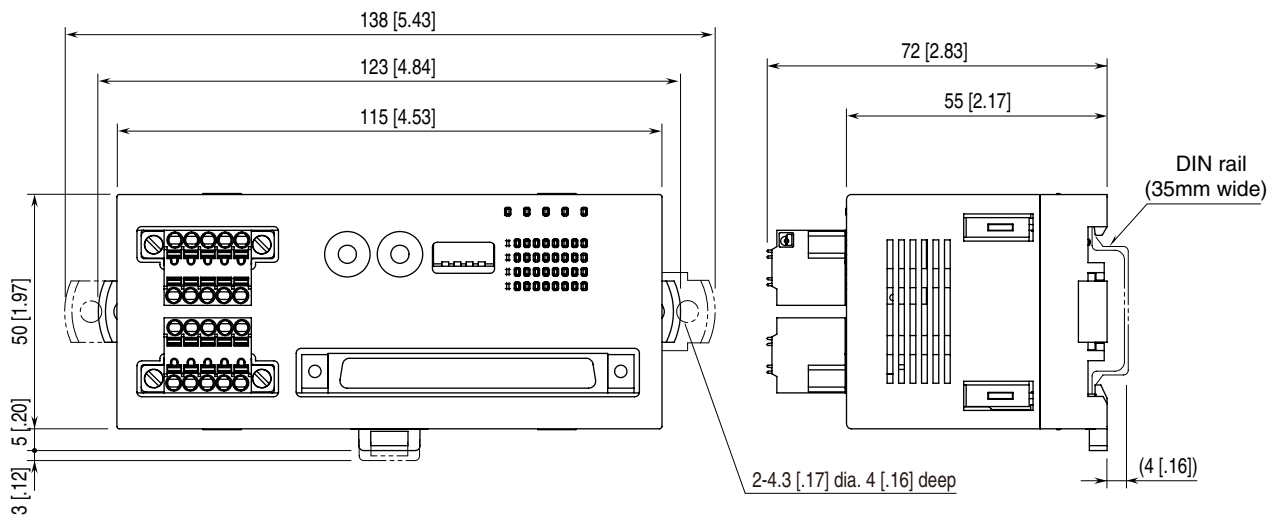


Note: leave at least 10 mm (.39 in.) at the both side of the unit.

TERMINAL CONNECTIONS

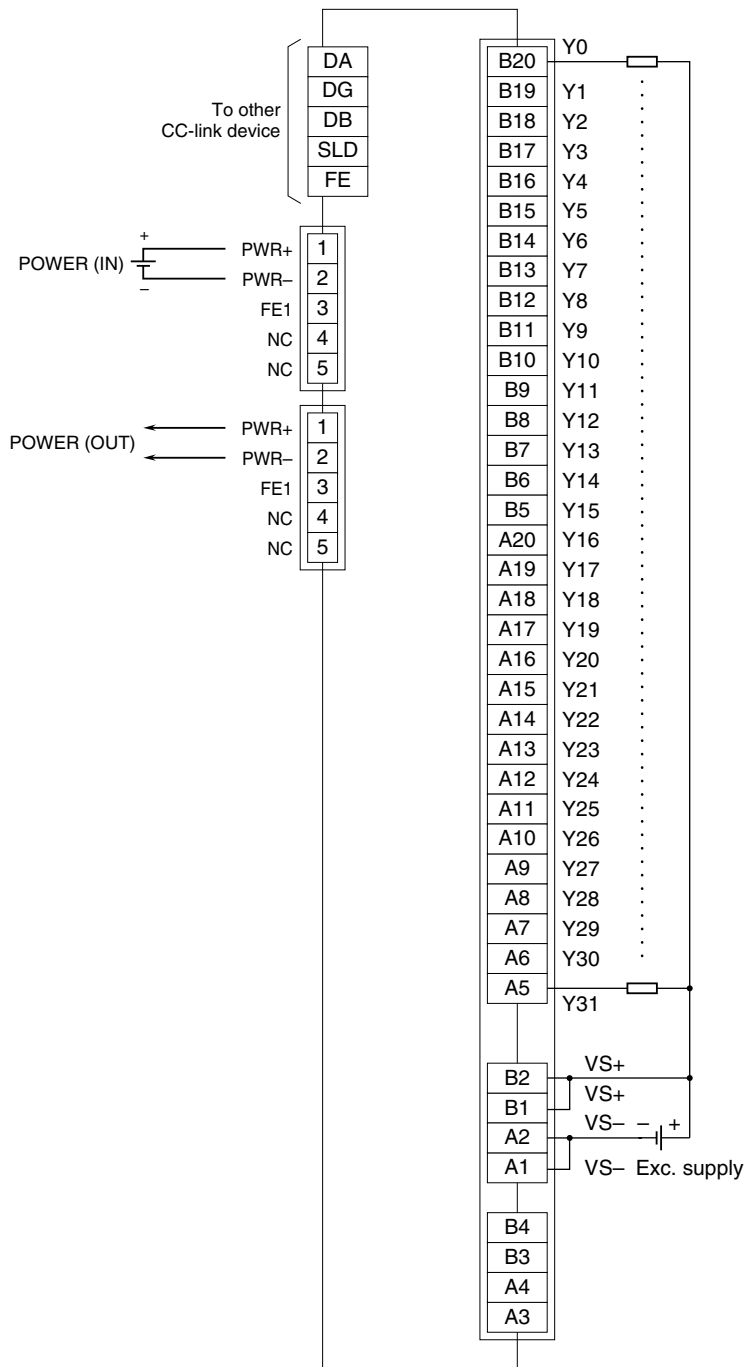
Connect the unit as in the diagram below.

■ EXTERNAL DIMENSIONS unit: mm [inch]

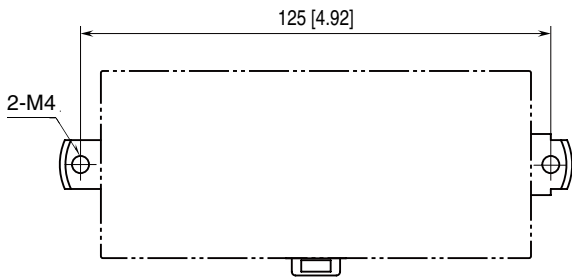


■ CONNECTION DIAGRAM

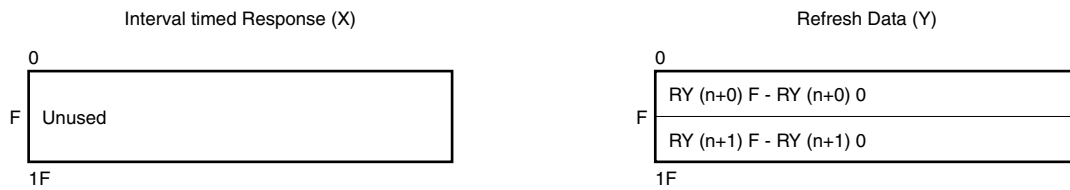
Note: In order to improve EMC performance, bond the FE1 terminal to ground.
 Caution: FE1 terminal is NOT a protective conductor terminal.



MOUNTING REQUIREMENTS unit: mm (inch)

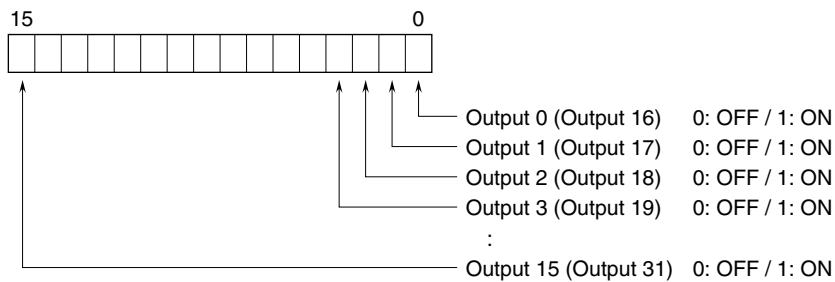


DATA ALLOCATION



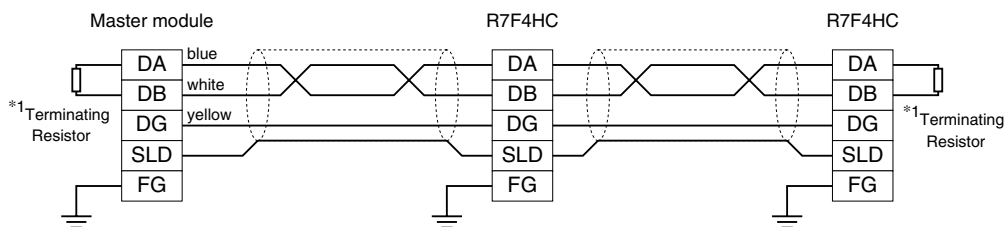
I/O DATA DESCRIPTIONS

DISCRETE OUTPUT



COMMUNICATION CABLE WIRING

MASTER CONNECTION



*1. Turn on the terminator DIP switch to activate the internal terminating resistor.