

## CC-Link I/O MODULE

(PNP discrete output, 32 points, FCN connector)

MODEL R7F4HC-DC32B-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

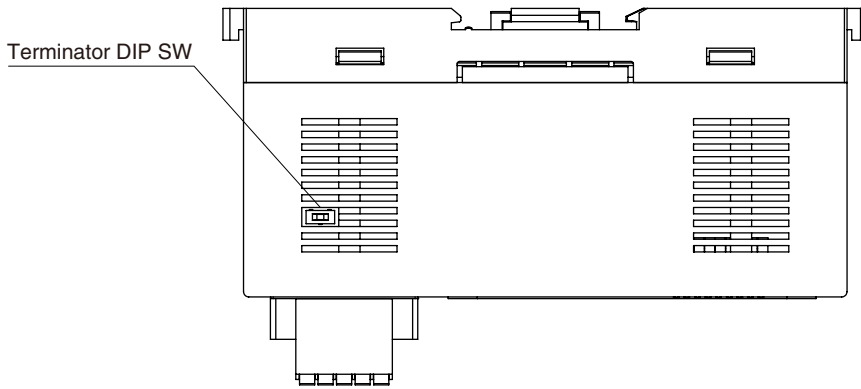
- Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

#### ■ AND ....

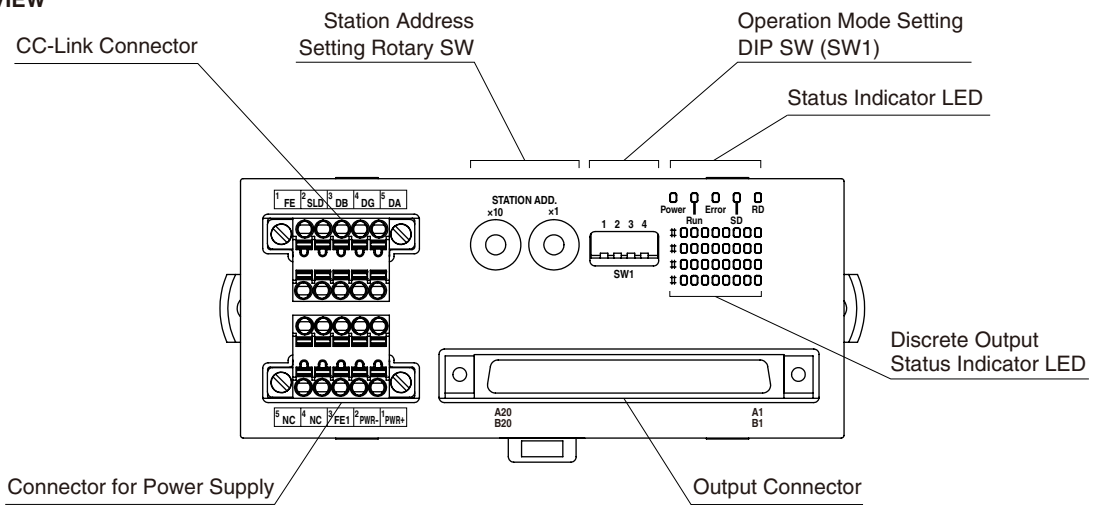
- The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

# 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

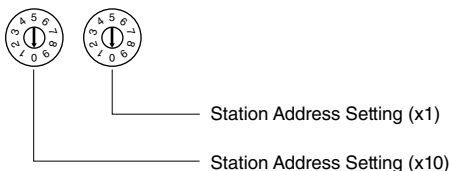
Green LED shows the output status.

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)	OFF
Hold the output (*) (maintains the last data received normally)	ON

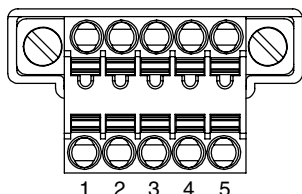
### TERMINATING RESISTOR

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

**■CC-Link, POWER SUPPLY ASSIGNMENT**

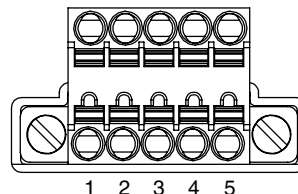
Unit side connector: MC1,5/5-GF-3,5 (Phoenix Contact)  
 Cable side connector: TFMC1,5/5-STF-3,5 (Phoenix Contact)  
 Applicable wire size: 0.2 - 1.5mm<sup>2</sup>, stripped length 10mm  
 A10,25-10YE 0.25mm<sup>2</sup> (Phoenix Contact)  
 A0,34-10TQ 0.34mm<sup>2</sup> (Phoenix Contact)  
 A10,5-10WH 0.5mm<sup>2</sup> (Phoenix Contact)  
 A10,75-10GY 0.75mm<sup>2</sup> (Phoenix Contact)  
 A11-10 1.0mm<sup>2</sup> (Phoenix Contact)  
 A11,5-10 1.5mm<sup>2</sup> (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)



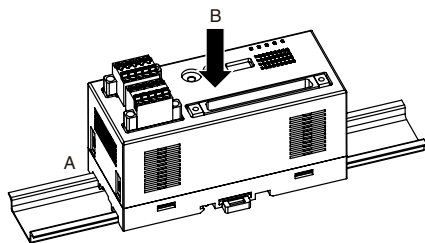
PIN NO.	ID	FUNCTION	PIN NO.	ID	FUNCTION
A1	VS-	Exc. supply -	B1	VS+	Exc. supply +
A2	VS-	Exc. supply -	B2	VS+	Exc. supply +
A3	NC	Unused	B3	NC	Unused
A4	NC	Unused	B4	NC	Unused
A5	Y1F	Output 31	B5	YF	Output 15
A6	Y1E	Output 30	B6	YE	Output 14
A7	Y1D	Output 29	B7	YD	Output 13
A8	Y1C	Output 28	B8	YC	Output 12
A9	Y1B	Output 27	B9	YB	Output 11
A10	Y1A	Output 26	B10	YA	Output 10
A11	Y19	Output 25	B11	Y9	Output 9
A12	Y18	Output 24	B12	Y8	Output 8
A13	Y17	Output 23	B13	Y7	Output 7
A14	Y16	Output 22	B14	Y6	Output 6
A15	Y15	Output 21	B15	Y5	Output 5
A16	Y14	Output 20	B16	Y4	Output 4
A17	Y13	Output 19	B17	Y3	Output 3
A18	Y12	Output 18	B18	Y2	Output 2
A19	Y11	Output 17	B19	Y1	Output 1
A20	Y10	Output 16	B20	Y0	Output 0

## MOUNTING INSTRUCTIONS

### ■ DIN RAIL MOUNTING (PARALLEL)

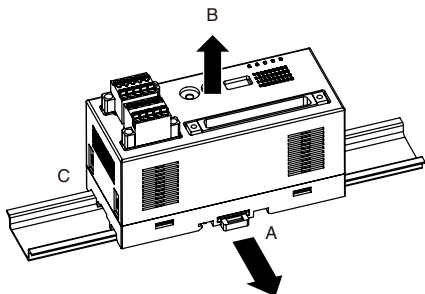
#### • Mounting

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



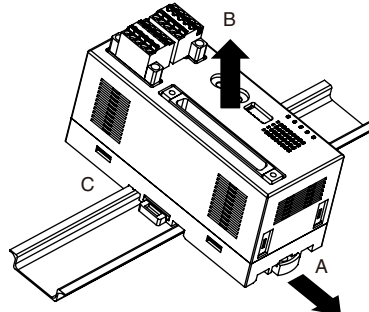
#### • Dismounting

- 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.



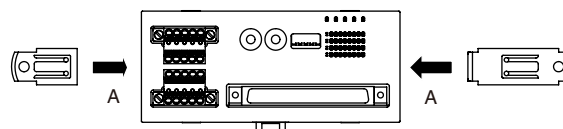
#### • Dismounting

- 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.

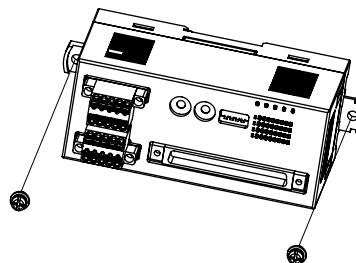


### ■ SURFACE MOUNTING

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



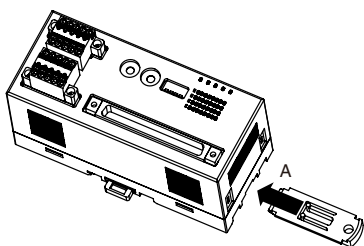
- B) Mount the unit with M4 screws referring the External Dimensions. (Torque: 1.4 N·m)



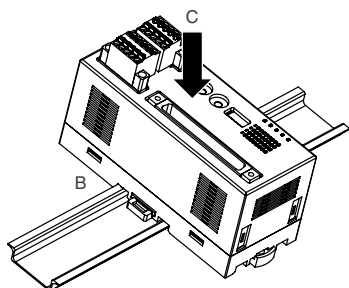
### ■ DIN RAIL MOUNTING (RIGHT ANGLE)

#### • 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.

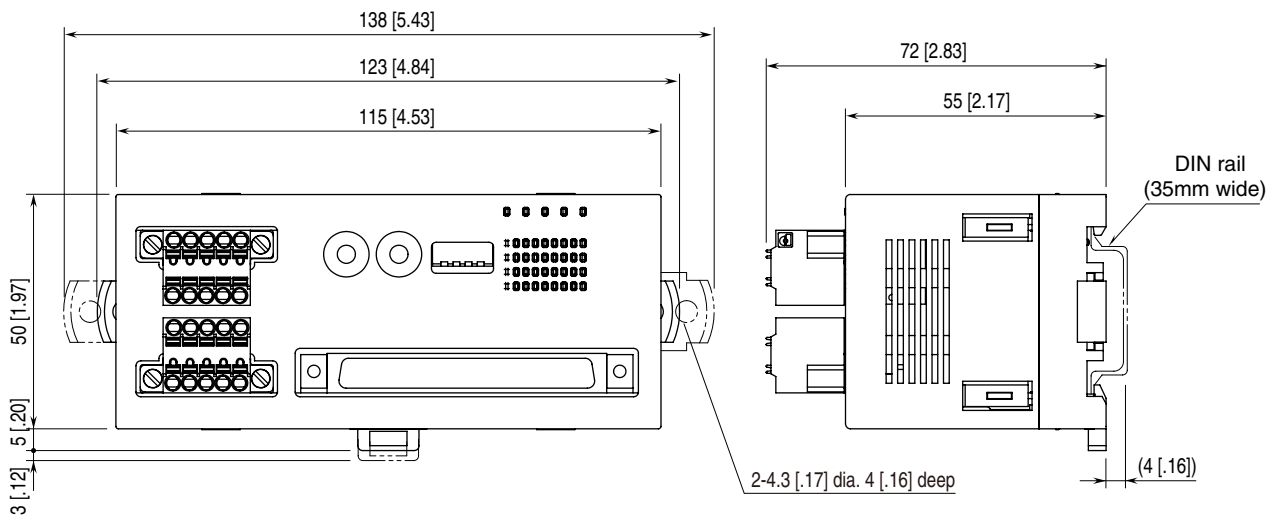


Note: leave at least 10 mm (.39 in.) at the both side of the unit.

## TERMINAL CONNECTIONS

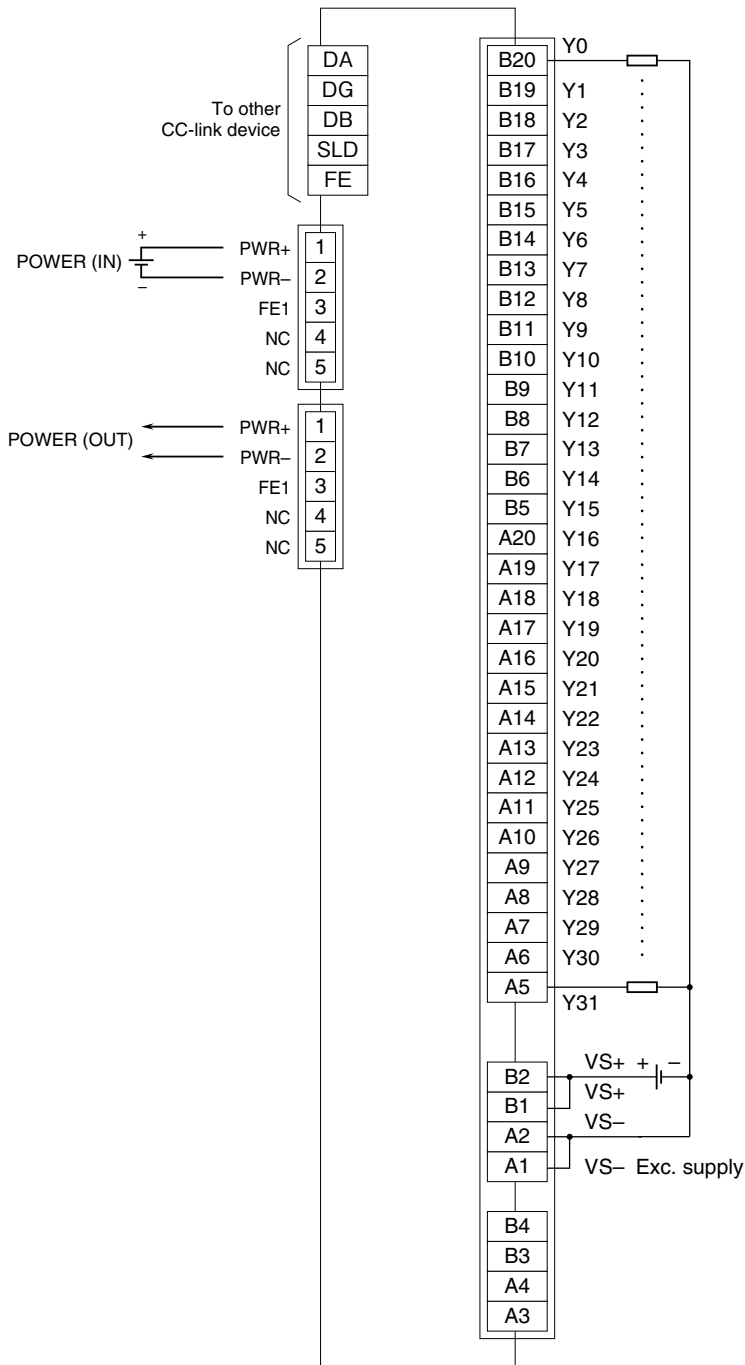
Connect the unit as in the diagram below.

### EXTERNAL DIMENSIONS unit: mm [inch]

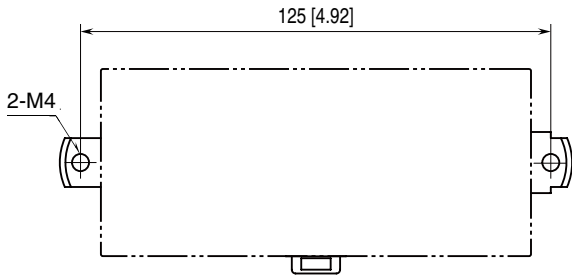


■ CONNECTION DIAGRAM

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)

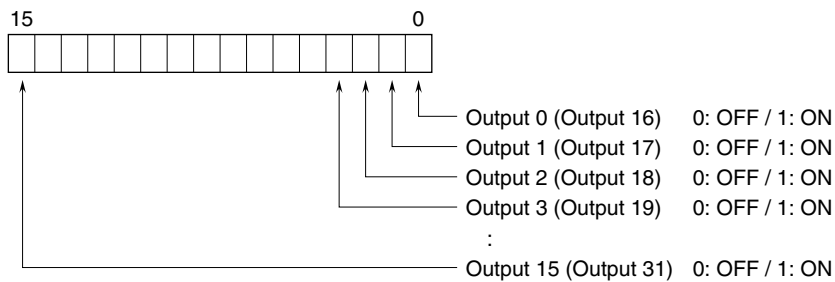


## DATA ALLOCATION



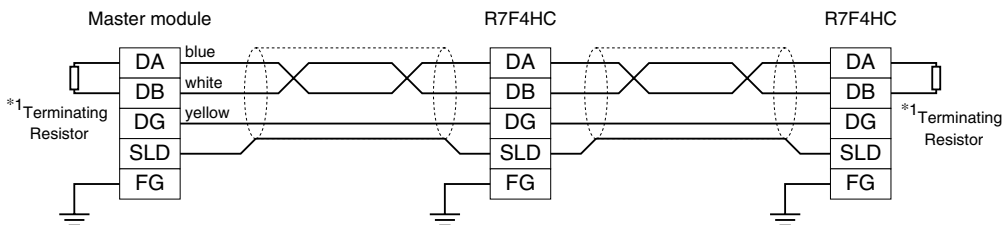
## I/O DATA DESCRIPTIONS

### DISCRETE OUTPUT



## COMMUNICATION CABLE WIRING

### MASTER CONNECTION



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