

## Remote I/O R7F4D Series

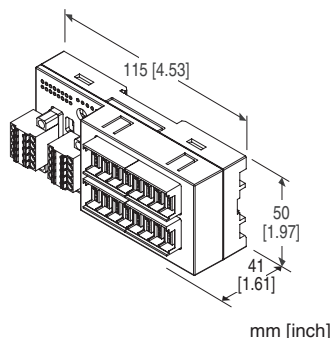
/C03: Rubber coating

### CC-Link I/O MODULE

(PNP transistor output, 16 points each, e-CON connector)

#### Functions & Features

- Interchanges discrete I/O signals with the fieldbus (CC-Link)



## MODEL: R7F4DC-DC16B-H-R[1]

### ORDERING INFORMATION

- Code number: R7F4DC-DC16B-H-R[1]  
Specify a code from below for [1].  
(e.g. R7F4DC-DC16B-H-R/Q)
- Specify the specification for option code /Q  
(e.g. /C01)

### I/O TYPE

**DC16B:** PNP transistor output, 16 points

### TERMINAL BLOCK

**H:** Tension clamp terminal block for power  
Tension clamp terminal block for communication  
e-CON connector for output

### POWER INPUT

#### DC Power

R: 24 V DC

(Operational voltage range 24 V  $\pm$ 10 %, ripple 10 %p-p max.)

### [1] OPTIONS

blank: none

/Q: With options (specify the specification)

### SPECIFICATIONS OF OPTION: Q

**COATING (For the detail, refer to M-System's web site.)**

/C01: Silicone coating

/C02: Polyurethane coating

### RELATED PRODUCTS

- CSP+ file  
The CSP+ file are downloadable at M-System's web site.  
CSP+ file is also downloadable at CC-Link Partner Association's web site.

### GENERAL SPECIFICATIONS

#### Connection

**CC-Link:** Tension clamp terminal block  
**Power supply, exc. supply:** Tension clamp terminal  
**Output:** e-CON connector

**Housing material:** Flame-resistant resin (gray)

**Isolation:** Output or exc. supply to CC-Link to power supply to FE1

**Discrete output status indicator LED:** Green LED; turns on with output ON

### CC-Link COMMUNICATION

**Transmission:** CC-Link ver.1.10

**Network cable:** CC-Link cable designated by Mitsubishi Electric

**Station type:** Remote I/O device

**Station number:** 1 - 64 (rotary switch, default:00)

**Baud rate setting:** 156 kbps (default), 625 kbps, 2.5 Mbps, 5 Mbps, 10 Mbps (DIP switch)

**Terminating resistor:** Built-in (DIP Switch, default: disable)

**Status indicator LEDs:** Power, Run, Error, SD, RD

For details, refer to the users manual.

### OUTPUT SPECIFICATIONS

**Common:** Positive common (PNP) per 16 points

**Number of output:** 16 points

**Maximum outputs applicable at once:** No limit (at 24 V DC)

**Rated load voltage:** 24 V DC  $\pm$ 10 %, ripple 5 %p-p max.,  $\leq$  1 A (including discrete output load charge); rated current 8 A

**Rated output current:** 0.1 A per point, 1.6 A per common

**Residual voltage:**  $\leq$  1.2 V

**Leakage current:**  $\leq$  0.1 mA

**ON delay:**  $\leq$  0.2 msec.

**OFF delay:**  $\leq$  0.5 msec.

With shortcircuit protection

With overheat protection

(When driving an inductive load, connect a diode in parallel with the load.)

## INSTALLATION

### Current consumption

•DC: Approx. 35 mA

(contact I/O load charge is not included)

**Operating temperature:** -10 to +55°C (14 to 131°F)

**Storage temperature:** -20 to +65°C (-4 to +149°F)

**Operating humidity:** 30 to 90 %RH (non-condensing)

**Atmosphere:** No corrosive gas or heavy dust

**Mounting:** Surface or DIN rail (35 mm rail)

**Weight:** 120 g (0.26 lb)

## PERFORMANCE

**Insulation resistance:**  $\geq 100 \text{ M}\Omega$  with 500 V DC

**Dielectric strength:** 1500 V AC @ 1 minute

(output or exc. supply to communication/power supply)

## STANDARDS & APPROVALS

### EU conformity:

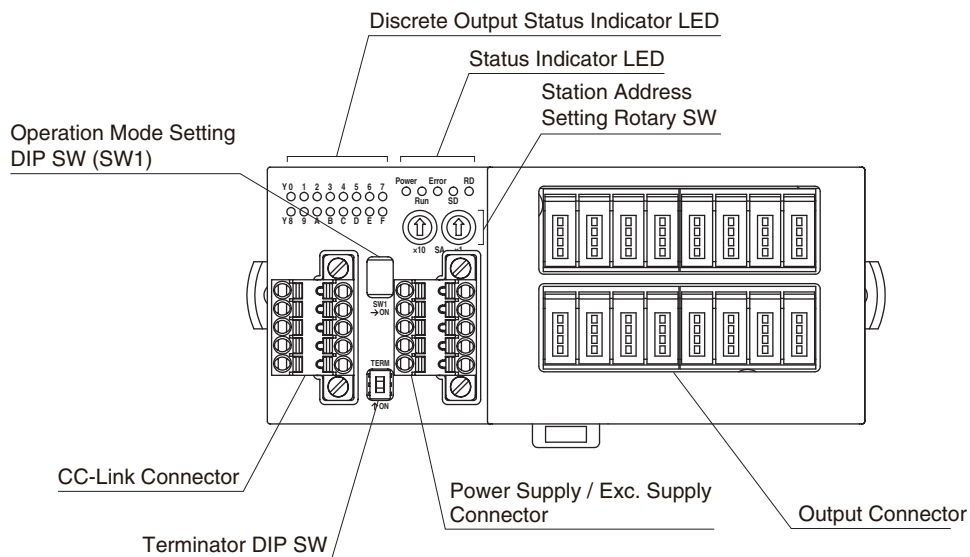
EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

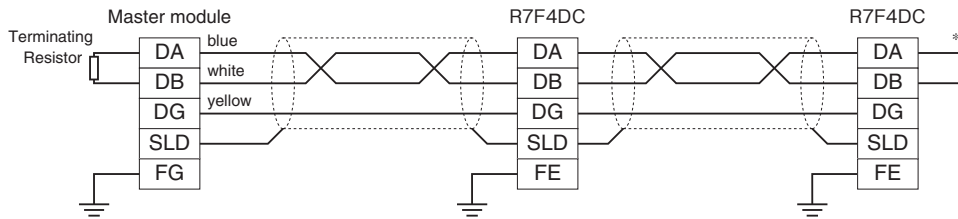
RoHS Directive

## EXTERNAL VIEW



## COMMUNICATION CABLE WIRING

### ■ MASTER CONNECTION



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

## TERMINAL ASSIGNMENTS

### ■ CC-Link, POWER SUPPLY, EXC. SUPPLY ASSIGNMENT

Unit side connector: MCV1,5/5-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

Recommended solderless terminal:

AI0,25-10YE 0.25mm<sup>2</sup> (Phoenix contact)

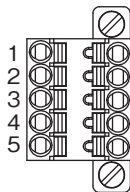
AI0,34-10TQ 0.34mm<sup>2</sup> (Phoenix contact)

AI0,5-10WH 0.5mm<sup>2</sup> (Phoenix contact)

AI0,75-10GY 0.75mm<sup>2</sup> (Phoenix contact)

AI1-10 1.0mm<sup>2</sup> (Phoenix contact)

AI1,5-10 1.5mm<sup>2</sup> (Phoenix contact)



#### · CC-Link

PIN NO.	ID	FUNCTION
1	FE	Function earth
2	SLD	Shield
3	DB	DB
4	DG	DG
5	DA	DA

#### · POWER SUPPLY / EXC. SUPPLY

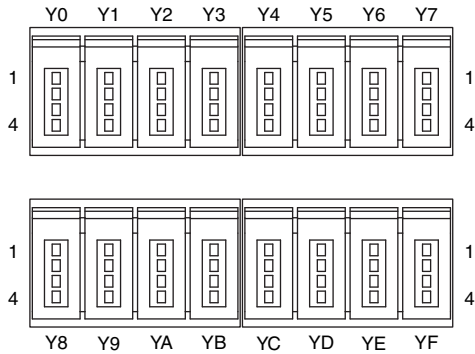
PIN NO.	ID	FUNCTION
1	PWR+	Power supply +
2	PWR-	Power supply -
3	FE1	Grounding
4	SNSR.EXC+	Exc. supply +
5	SNSR.EXC-	Exc. supply -

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 TERMINAL ASSIGNMENT

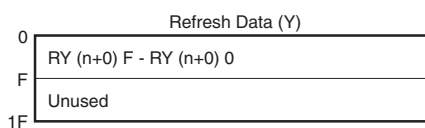
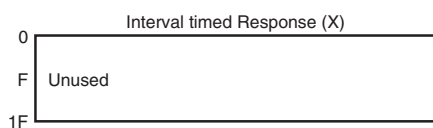
# MODEL: R7F4DC-DC16B-H

Unit side connector: 37216-62M3-004PL (3M company)  
 Cable side connector: 37104-( )-000FL (3M company)  
 (The cable connector is not included in the package.)  
 Specify wire size instead of ( ); refer to the specifications of the product.)



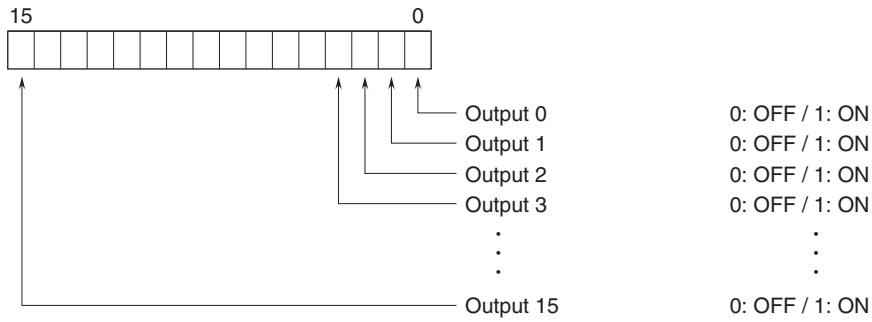
PIN NO.	ID	FUNCTION	PIN NO.	ID	FUNCTION
Y0	1	NC	Y8	1	NC
	2	NC		2	NC
	3	GND		3	GND
	4	Y0		4	Y8
Y1	1	NC	Y9	1	NC
	2	NC		2	NC
	3	GND		3	GND
	4	Y1		4	Y9
Y2	1	NC	YA	1	NC
	2	NC		2	NC
	3	GND		3	GND
	4	Y2		4	YA
Y3	1	NC	YB	1	NC
	2	NC		2	NC
	3	GND		3	GND
	4	Y3		4	YB
Y4	1	NC	YC	1	NC
	2	NC		2	NC
	3	GND		3	GND
	4	Y4		4	YC
Y5	1	NC	YD	1	NC
	2	NC		2	NC
	3	GND		3	GND
	4	Y5		4	YD
Y6	1	NC	YE	1	NC
	2	NC		2	NC
	3	GND		3	GND
	4	Y6		4	YE
Y7	1	NC	YF	1	NC
	2	NC		2	NC
	3	GND		3	GND
	4	Y7		4	YF

## DATA ALLOCATION

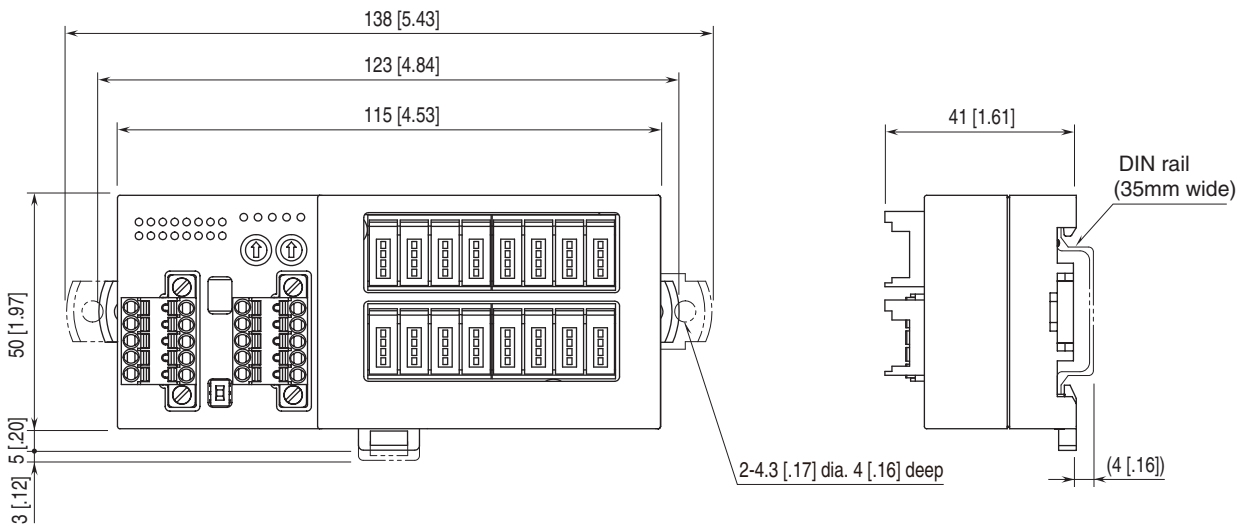


## I/O DATA DESCRIPTIONS

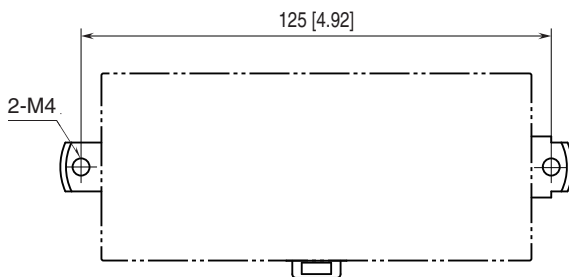
### ■ DISCRETE OUTPUT



## EXTERNAL DIMENSIONS unit: mm [inch]



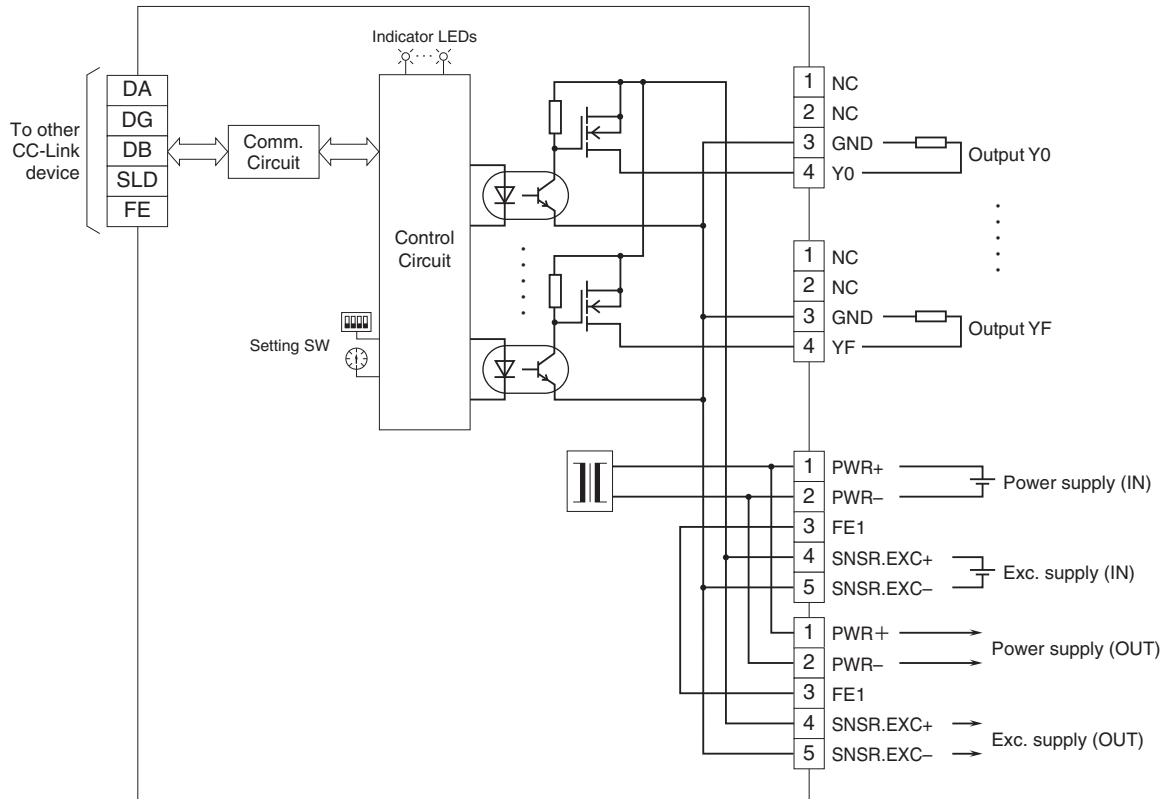
## MOUNTING REQUIREMENTS unit: mm [inch]



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

Note: In order to improve EMC performance, bond the FE1 terminal to ground.

Caution: FE1 terminal is NOT a protective conductor terminal.



Specifications are subject to change without notice.