

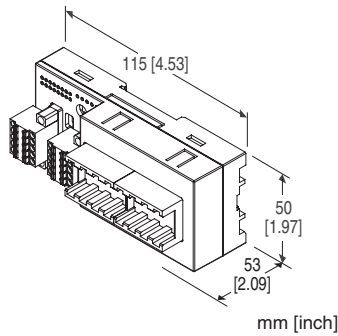
## Remote I/O R7F4D Series

### CC-Link I/O MODULE

(NPN discrete input & NPN transistor output, 8 points each, one-touch connector)

#### Functions & Features

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



## MODEL: R7F4DC-DAC16C-J-R[1]

### ORDERING INFORMATION

- Code number: R7F4DC-DAC16C-J-R[1]  
Specify a code from below for [1].  
(e.g. R7F4DC-DAC16C-J-R/Q)
- Specify the specification for option code /Q  
(e.g. /C01)

### I/O TYPE

**DAC16C:** NPN discrete input & NPN transistor output, 8 points each

### TERMINAL BLOCK

- J: Tension clamp terminal block for power  
Tension clamp terminal block for communication  
One-touch connector for I/O

### 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 our web site.)
- /C01: Silicone coating
- /C02: Polyurethane coating
- /C03: Rubber coating

### RELATED PRODUCTS

- CSP+ file  
The CSP+ file are downloadable at our 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 block
- I/O:** One-touch connector
- Housing material:** Flame-resistant resin (gray)
- Isolation:** Input or output or exc. supply to CC-Link to power supply to FE1
- Discrete I/O status indicator LED:** Green LED turns on with I/O 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.

### INPUT SPECIFICATIONS

- Common:** Positive common (NPN) per 8 points
- Number of inputs:** 8
- Maximum inputs applicable at once:** No limit (at 24 V DC)
- Sensor excitation:** 24 V DC  $\pm$ 10 %; ripple 5 %p-p max.,  $\leq$  1 A (including discrete input load charge); rated current 8 A
- ON voltage / current:**  $\geq$  17 V DC (X0 through X7 to +24V) /  $\geq$  2.3 mA
- OFF voltage / current:**  $\leq$  5 V DC (X0 through X7 to +24V) /  $\leq$  0.75 mA
- Input current:**  $\leq$  3.5 mA per point at 24 V DC
- Input resistance:** Approx. 7.2 k $\Omega$
- ON delay:**  $\leq$  0.5 msec.
- OFF delay:**  $\leq$  0.5 msec.

## OUTPUT SPECIFICATIONS

**Common:** Negative common (NPN) per 8 points

**Number of output:** 8 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, 0.8 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. 30 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:**  $\geq 100$  M $\Omega$  with 500 V DC

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

(input or output or exc. supply to CC-Link to power supply to  
FE1)

## STANDARDS & APPROVALS

### EU conformity:

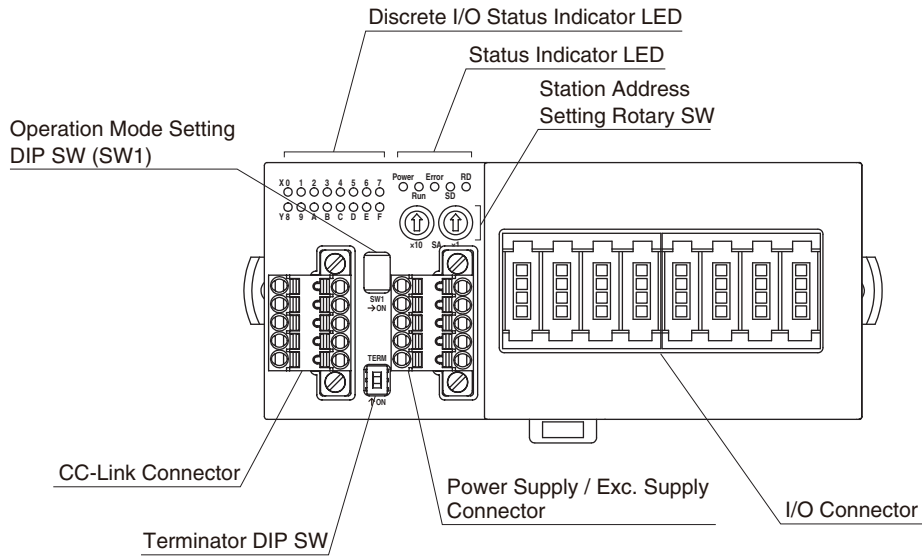
EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

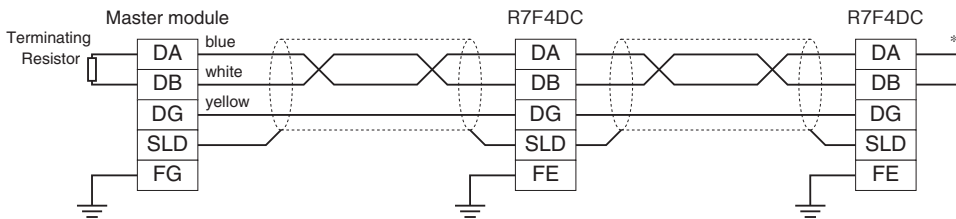
RoHS Directive

## 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)

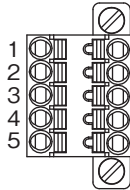
AI0,34-10TQ 0.34mm<sup>2</sup> (Phoenix contact)

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

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.

#### · 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 -

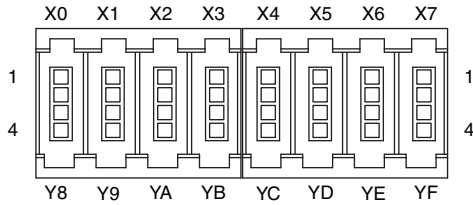
### ■ I/O TERMINAL ASSIGNMENT

# MODEL: R7F4DC-DAC16C-J

Unit side connector: 33216-62M3 PL (3M Company)

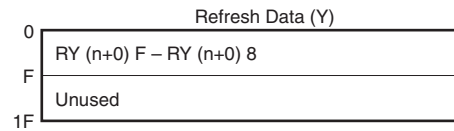
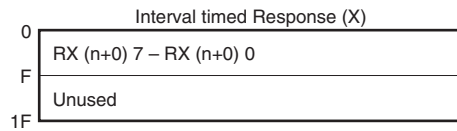
Cable side connector: 33104-6( )00 FL (3M Company)

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



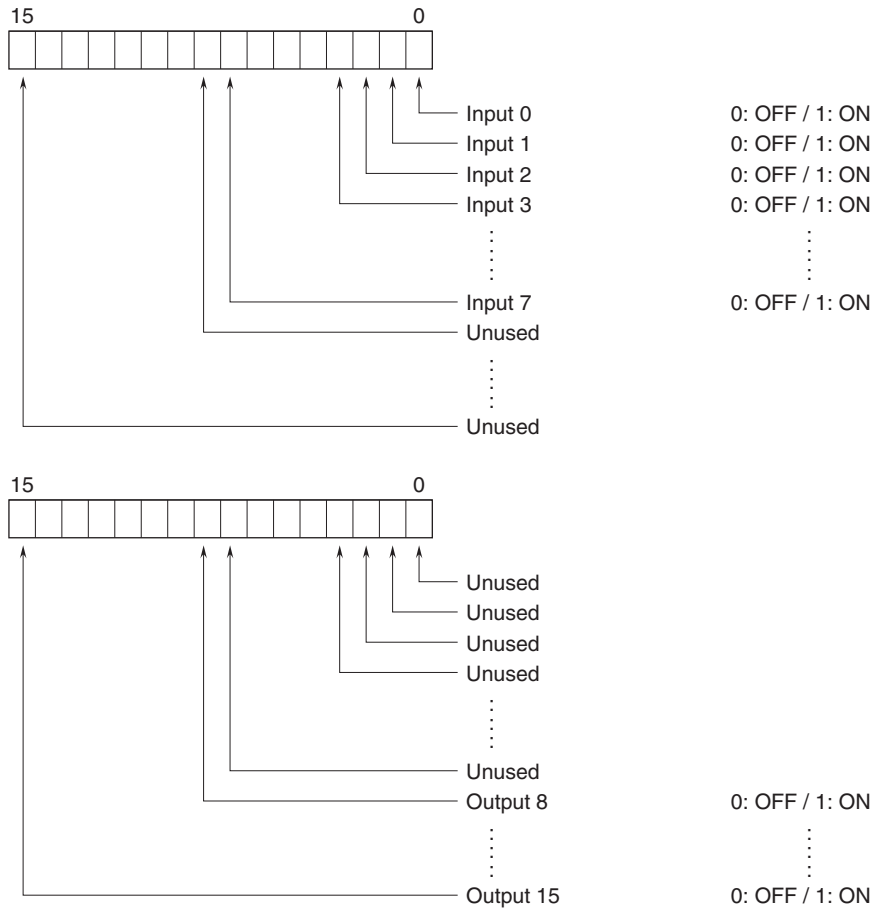
PIN NO.	ID	FUNCTION	PIN NO.	ID	FUNCTION		
X0	1	X0	Input 0	X4	1	X4	Input 4
Y8	2	Y8	Output 8	YC	2	YC	Output 12
	3	+24V	24V DC		3	+24V	24V DC
	4	GND	0V		4	GND	0V
X1	1	X1	Input 1	X5	1	X5	Input 5
Y9	2	Y9	Output 9	YD	2	YD	Output 13
	3	+24V	24V DC		3	+24V	24V DC
	4	GND	0V		4	GND	0V
X2	1	X2	Input 2	X6	1	X6	Input 6
YA	2	YA	Output 10	YE	2	YE	Output 14
	3	+24V	24V DC		3	+24V	24V DC
	4	GND	0V		4	GND	0V
X3	1	X3	Input 3	X7	1	X7	Input 7
YB	2	YB	Output 11	YF	2	YF	Output 15
	3	+24V	24V DC		3	+24V	24V DC
	4	GND	0V		4	GND	0V

## DATA ALLOCATION

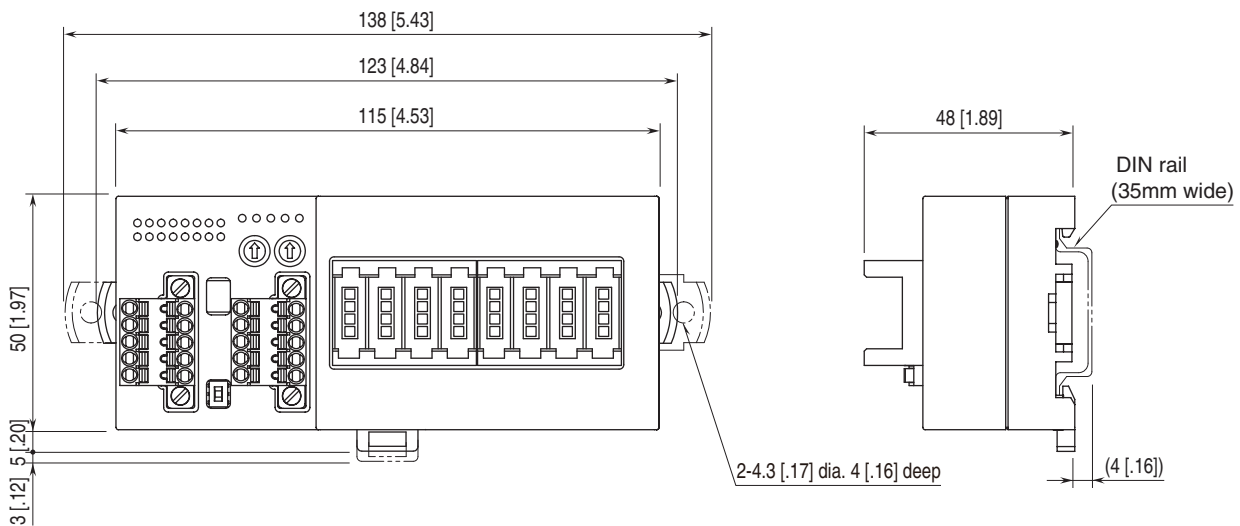


## I/O DATA DESCRIPTIONS

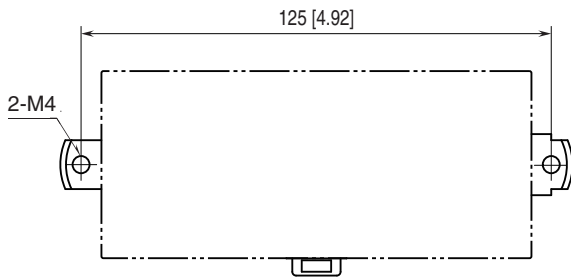
### ■ DISCRETE I/O



## EXTERNAL DIMENSIONS unit: mm [inch]



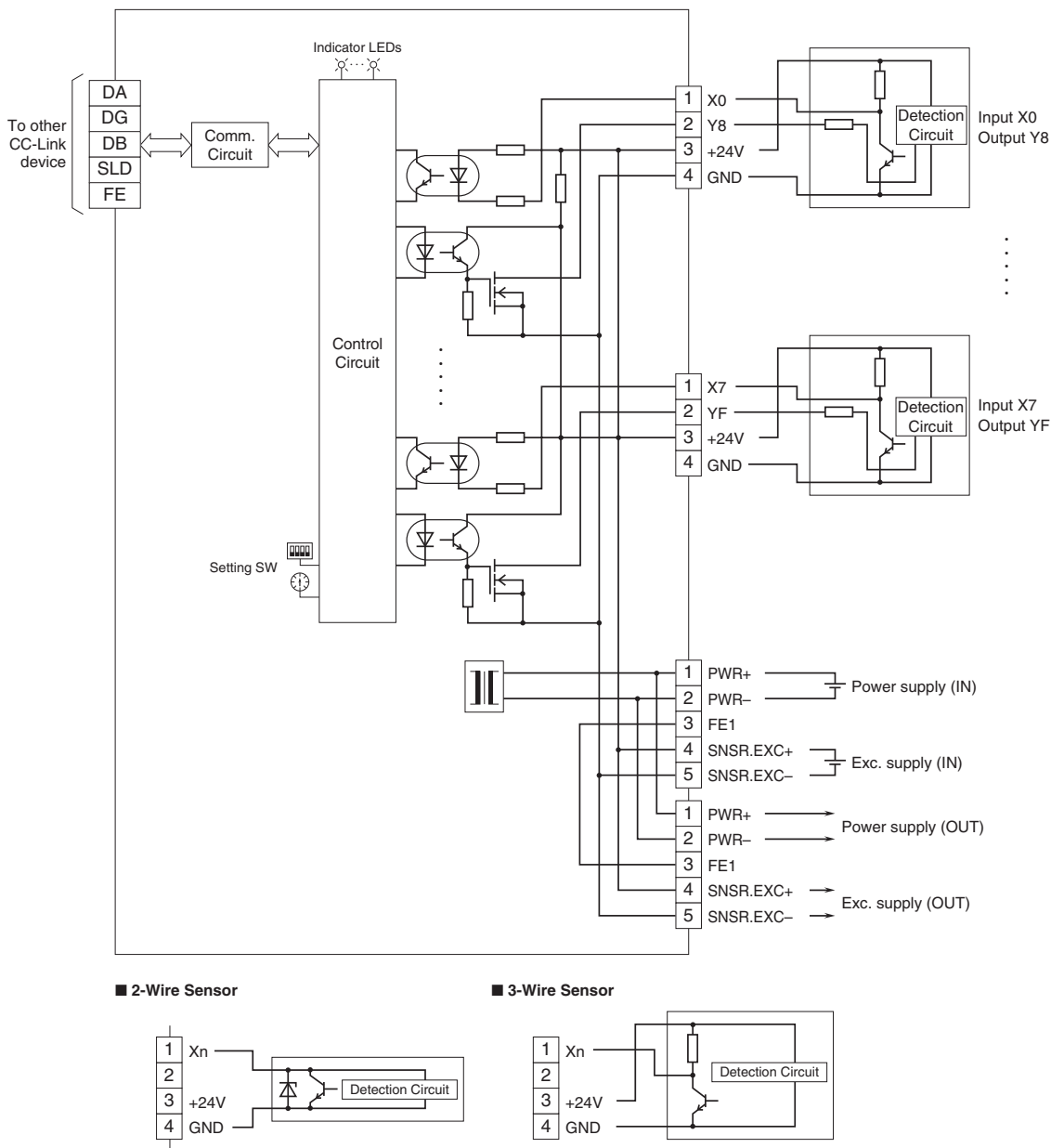
## MOUNTING REQUIREMENTS unit: mm [inch]



## 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.