

Remote I/O R7F4D Series

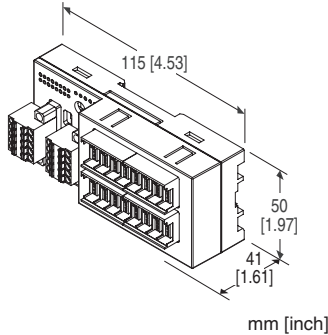
/C03: Rubber coating

CC-Link I/O MODULE

(NPN discrete input, 16 points, e-CON connector)

Functions & Features

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



MODEL: R7F4DC-DA16A-H-R[1]

ORDERING INFORMATION

- Code number: R7F4DC-DA16A-H-R[1]
Specify a code from below for [1].
(e.g. R7F4DC-DA16A-H-R/Q)
- Specify the specification for option code /Q
(e.g. /C01)

I/O TYPE

DA16A: NPN discrete input, 16 points

TERMINAL BLOCK

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

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

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
Input: e-CON connector

Housing material: Flame-resistant resin (gray)

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

Discrete input status indicator LED: Green LED turns on with input 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 16 points

Number of inputs: 16

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

Sensor excitation: 24 V DC \pm 10 %; ripple 5 %p-p max., \leq 2 A (including discrete input load charge); rated current 8 A

ON voltage / current: \geq 17 V DC (X0 through XF to +24V) / \geq 2.3 mA

OFF voltage / current: \leq 5 V DC (X0 through XF to +24V) / \leq 0.75 mA

Input current: \leq 3.5 mA per point at 24 V DC

Input resistance: Approx. 7.2 k Ω

ON delay: \leq 0.5 msec.

OFF delay: \leq 0.5 msec.

INSTALLATION

Current consumption

•DC: Approx. 26 mA

MODEL: R7F4DC-DA16A-H

(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

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

STANDARDS & APPROVALS

EU conformity:

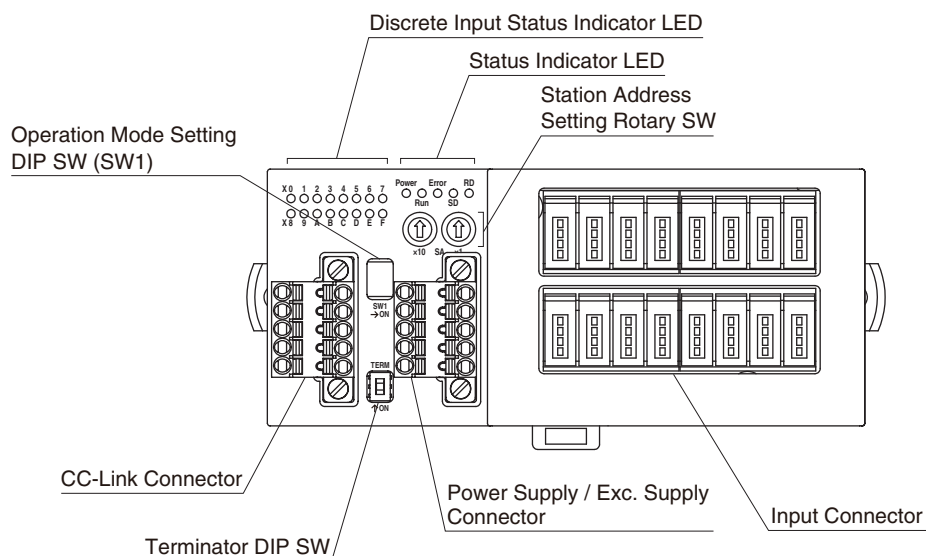
EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

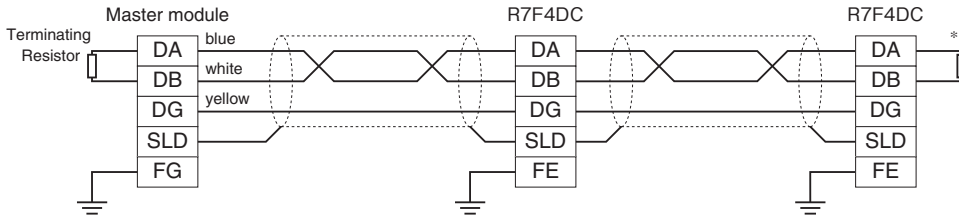
RoHS Directive

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 - 1.5mm²

Stripped length: 10mm

Recommended solderless terminal:

AI0,25-10YE 0.25mm² (Phoenix contact)

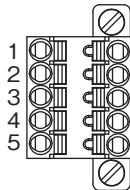
AI0,34-10TQ 0.34mm² (Phoenix contact)

AI0,5-10WH 0.5mm² (Phoenix contact)

AI0,75-10GY 0.75mm² (Phoenix contact)

AI1-10 1.0mm² (Phoenix contact)

AI1,5-10 1.5mm² (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.

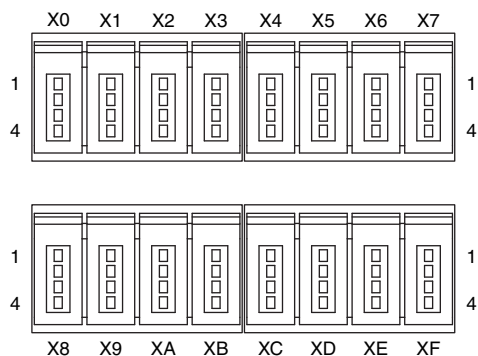
INPUT TERMINAL ASSIGNMENT

Unit side connector: 37216-62M3-004PL (3M company)

Cable side connector: 37104-()-000FL (3M company)

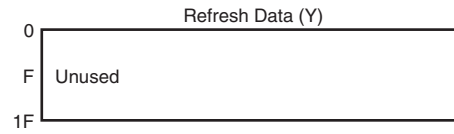
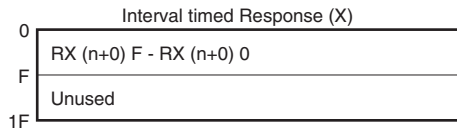
(The cable connector is not included in the package.)

Specify wire size instead of (); refer to the specifications of the product.)



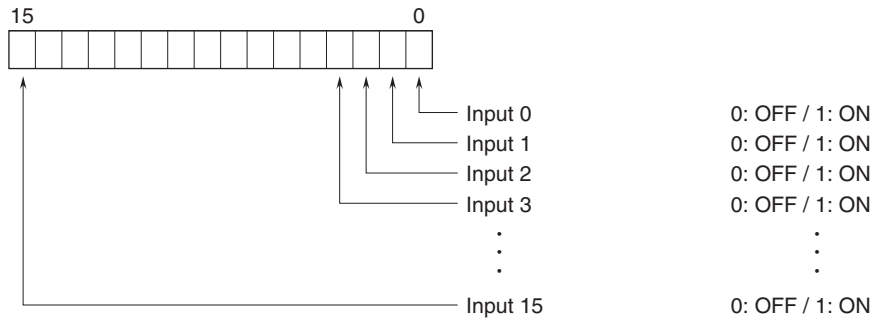
PIN NO.	ID	FUNCTION	PIN NO.	ID	FUNCTION
X0	1	+24V 24V DC	X8	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X0 Input 0		4	X8 Input 8
X1	1	+24V 24V DC	X9	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X1 Input 1		4	X9 Input 9
X2	1	+24V 24V DC	XA	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X2 Input 2		4	XA Input 10
X3	1	+24V 24V DC	XB	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X3 Input 3		4	XB Input 11
X4	1	+24V 24V DC	XC	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X4 Input 4		4	XC Input 12
X5	1	+24V 24V DC	XD	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X5 Input 5		4	XD Input 13
X6	1	+24V 24V DC	XE	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X6 Input 6		4	XE Input 14
X7	1	+24V 24V DC	XF	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X7 Input 7		4	XF Input 15

DATA ALLOCATION

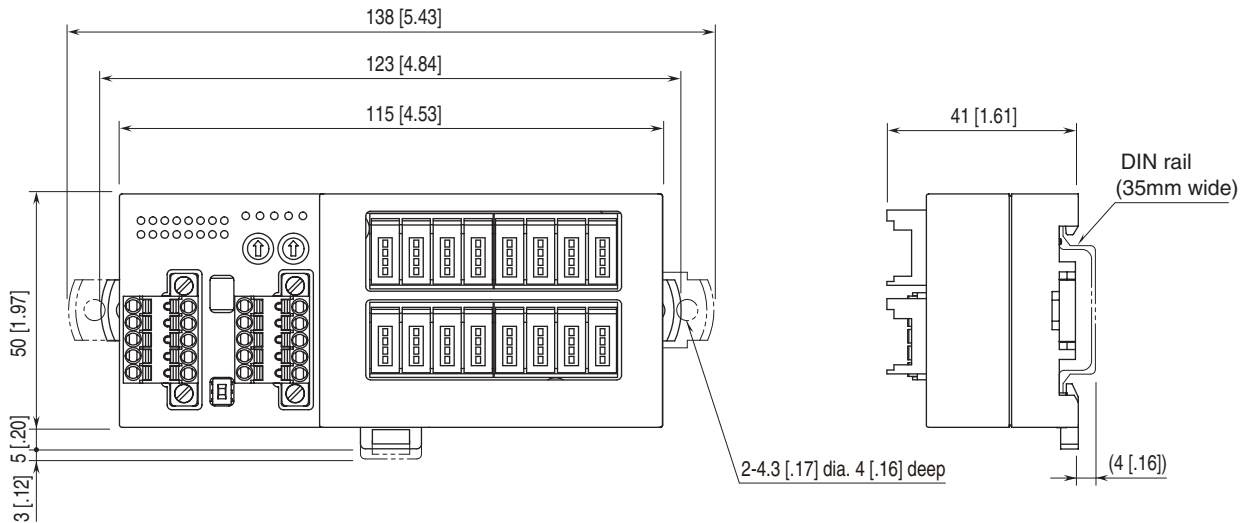


I/O DATA DESCRIPTIONS

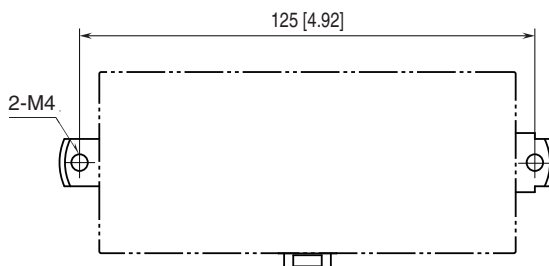
■ DISCRETE INPUT



EXTERNAL DIMENSIONS unit: mm [inch]



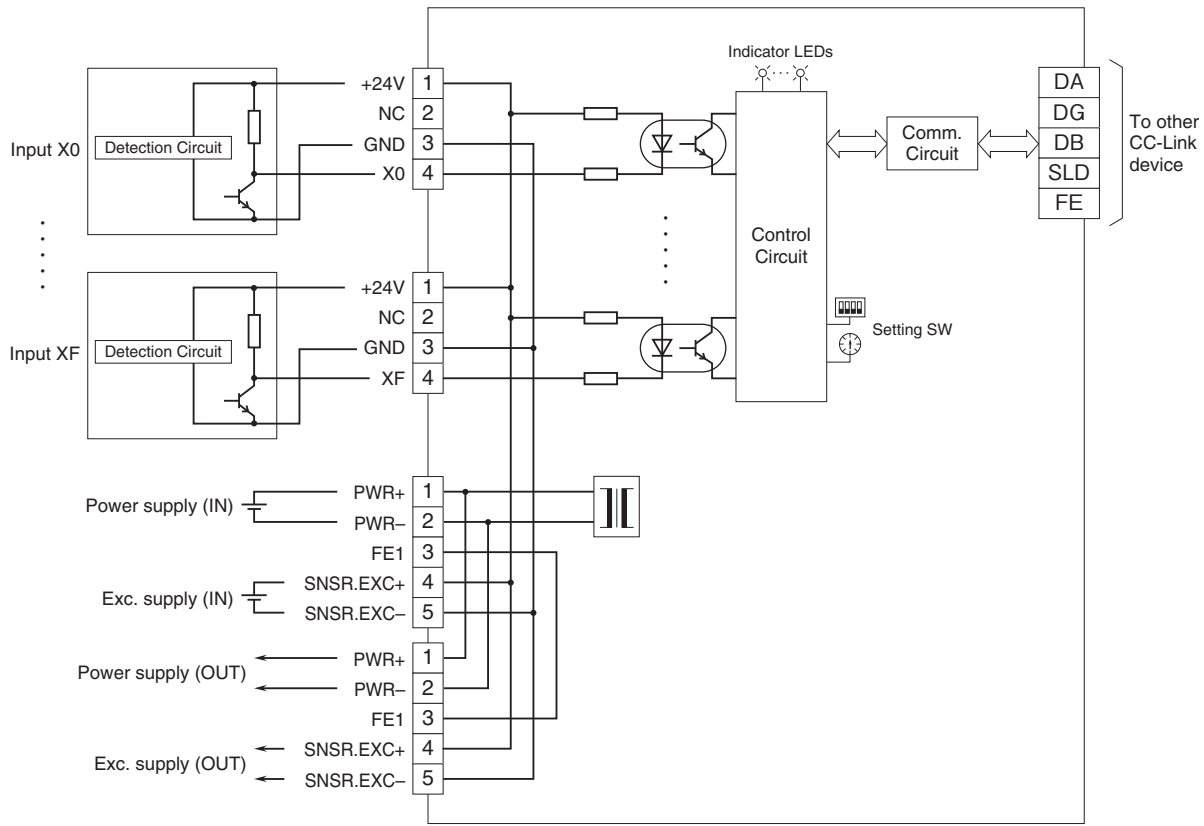
MOUNTING REQUIREMENTS unit: mm [inch]



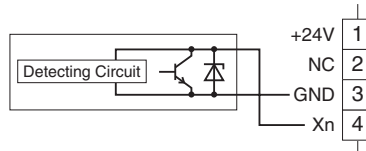
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

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

Caution: FE1 terminal is NOT a protective conductor terminal.



■ 2-Wire Sensor



Specifications are subject to change without notice.