

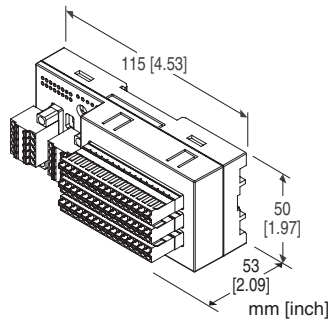
Remote I/O R7F4D Series

CC-Link I/O MODULE

(NPN discrete input & NPN transistor output, 8 points each, tension clamp terminal block)

Functions & Features

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



MODEL: R7F4DC-DAC16C-C-R[1]

ORDERING INFORMATION

- Code number: R7F4DC-DAC16C-C-R[1]
Specify a code from below for [1].
(e.g. R7F4DC-DAC16C-C-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

- C: Tension clamp terminal block for power
Tension clamp terminal block for communication
Tension clamp terminal block 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:** Tension clamp terminal block
- 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 Ω
- 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.,
 ≤ 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: ≤ 1.2 V

Leakage current: ≤ 0.1 mA

ON delay: ≤ 0.2 msec.

OFF delay: ≤ 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: 150 g (0.33 lb)

PERFORMANCE

Insulation resistance: ≥ 100 M Ω 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:

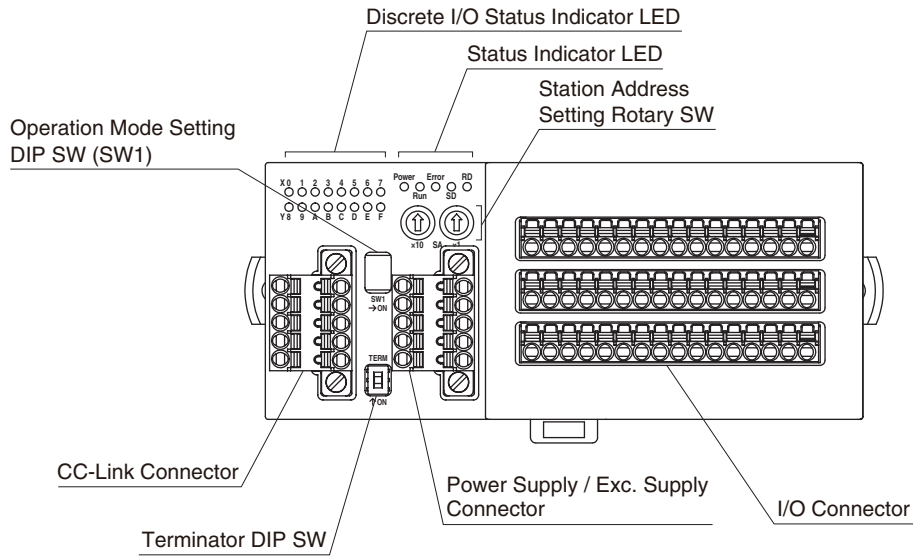
EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

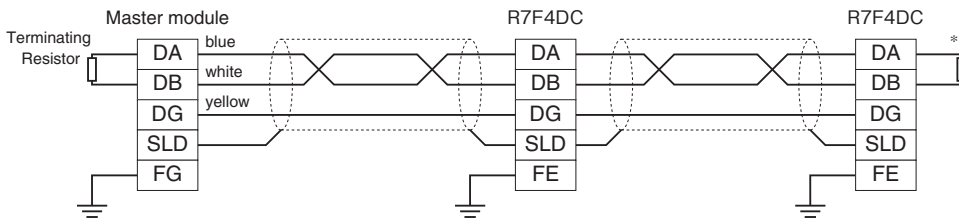
RoHS Directive

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 - 1.5mm²

Stripped length: 10mm

Recommended solderless terminal:

AI0,25-10YE 0.25mm² (Phoenix contact)

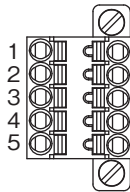
AI0,34-10TQ 0.34mm² (Phoenix contact)

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

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.

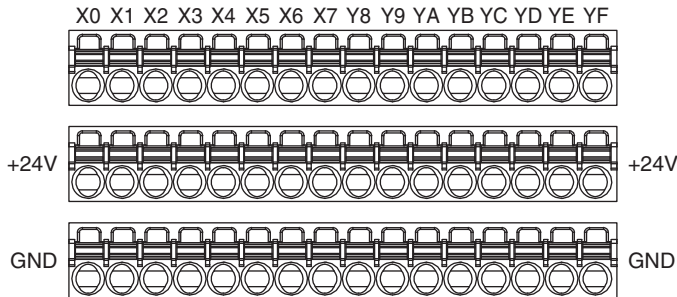
· POWER SUPPLY / EXC. SUPPLY

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 -

MODEL: R7F4DC-DAC16C-C

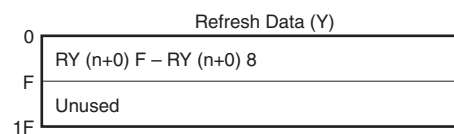
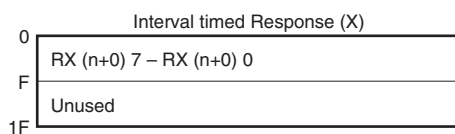
I/O TERMINAL ASSIGNMENT

Unit side connector: MCV1,5/16-G-3,5 (Phoenix Contact)
 Cable side connector: FMC1,5/16-ST-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)



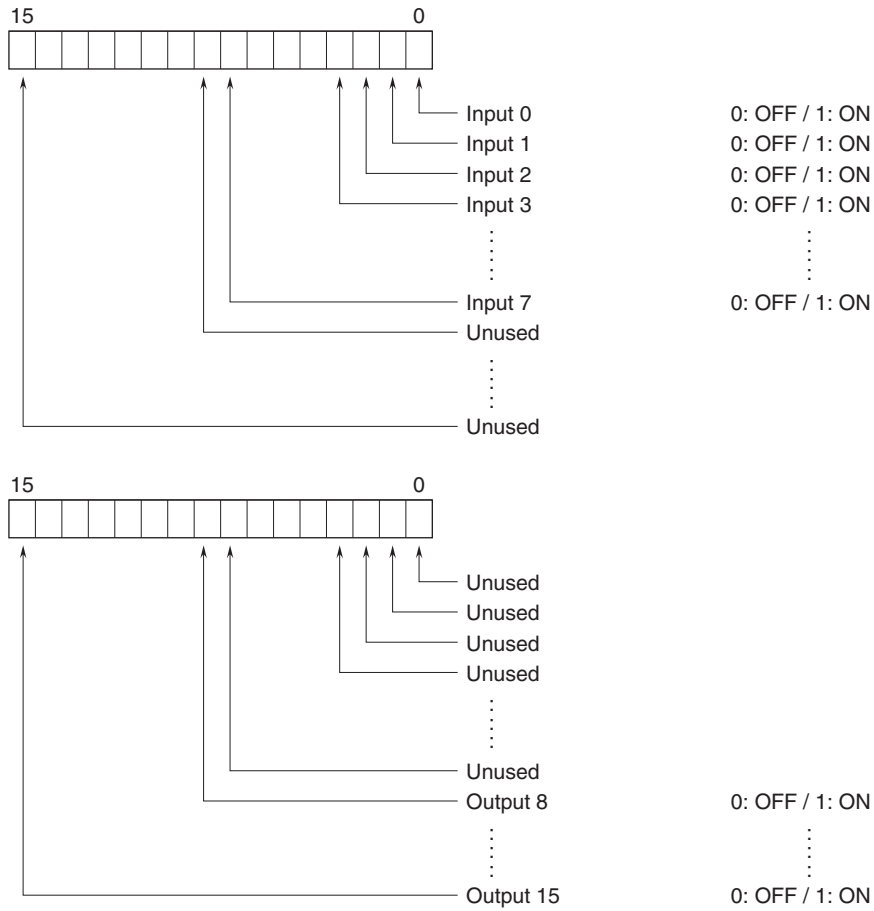
PIN NO.	ID	FUNCTION	PIN NO.	ID	FUNCTION
X0	1	X0	Y8	1	Y8
	2	+24V		2	+24V
	3	GND		3	GND
X1	1	X1	Y9	1	Y9
	2	+24V		2	+24V
	3	GND		3	GND
X2	1	X2	YA	1	YA
	2	+24V		2	+24V
	3	GND		3	GND
X3	1	X3	YB	1	YB
	2	+24V		2	+24V
	3	GND		3	GND
X4	1	X4	YC	1	YC
	2	+24V		2	+24V
	3	GND		3	GND
X5	1	X5	YD	1	YD
	2	+24V		2	+24V
	3	GND		3	GND
X6	1	X6	YE	1	YE
	2	+24V		2	+24V
	3	GND		3	GND
X7	1	X7	YF	1	YF
	2	+24V		2	+24V
	3	GND		3	GND

DATA ALLOCATION

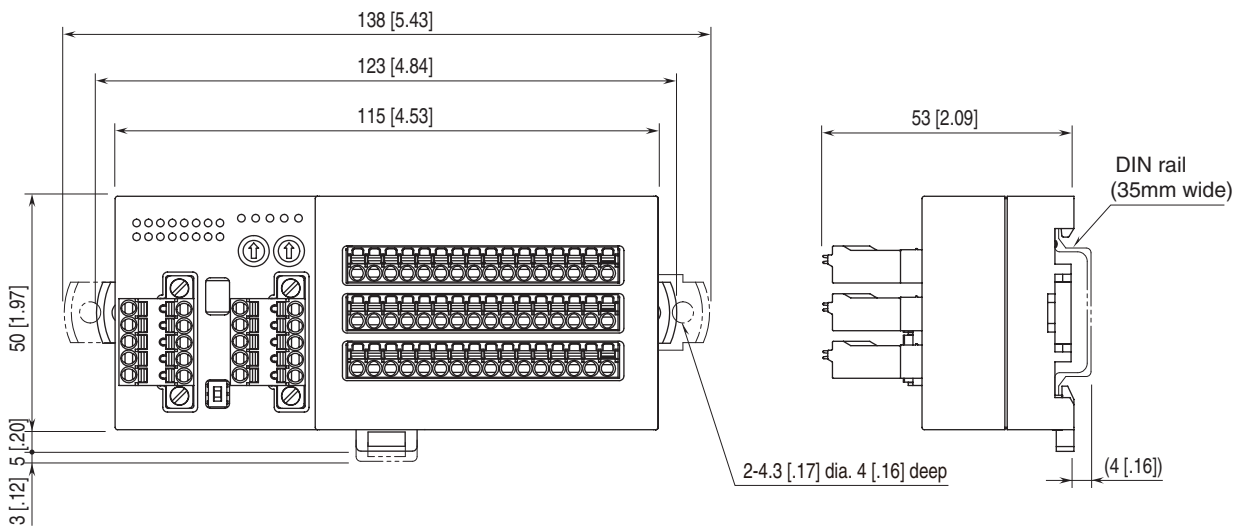


I/O DATA DESCRIPTIONS

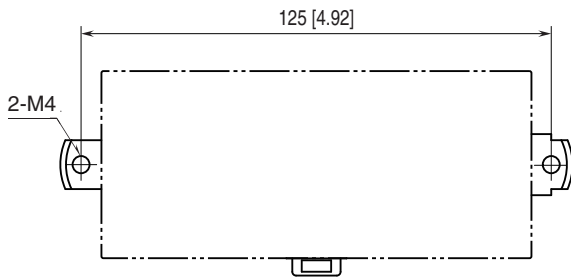
■ DISCRETE I/O



EXTERNAL DIMENSIONS unit: mm [inch]



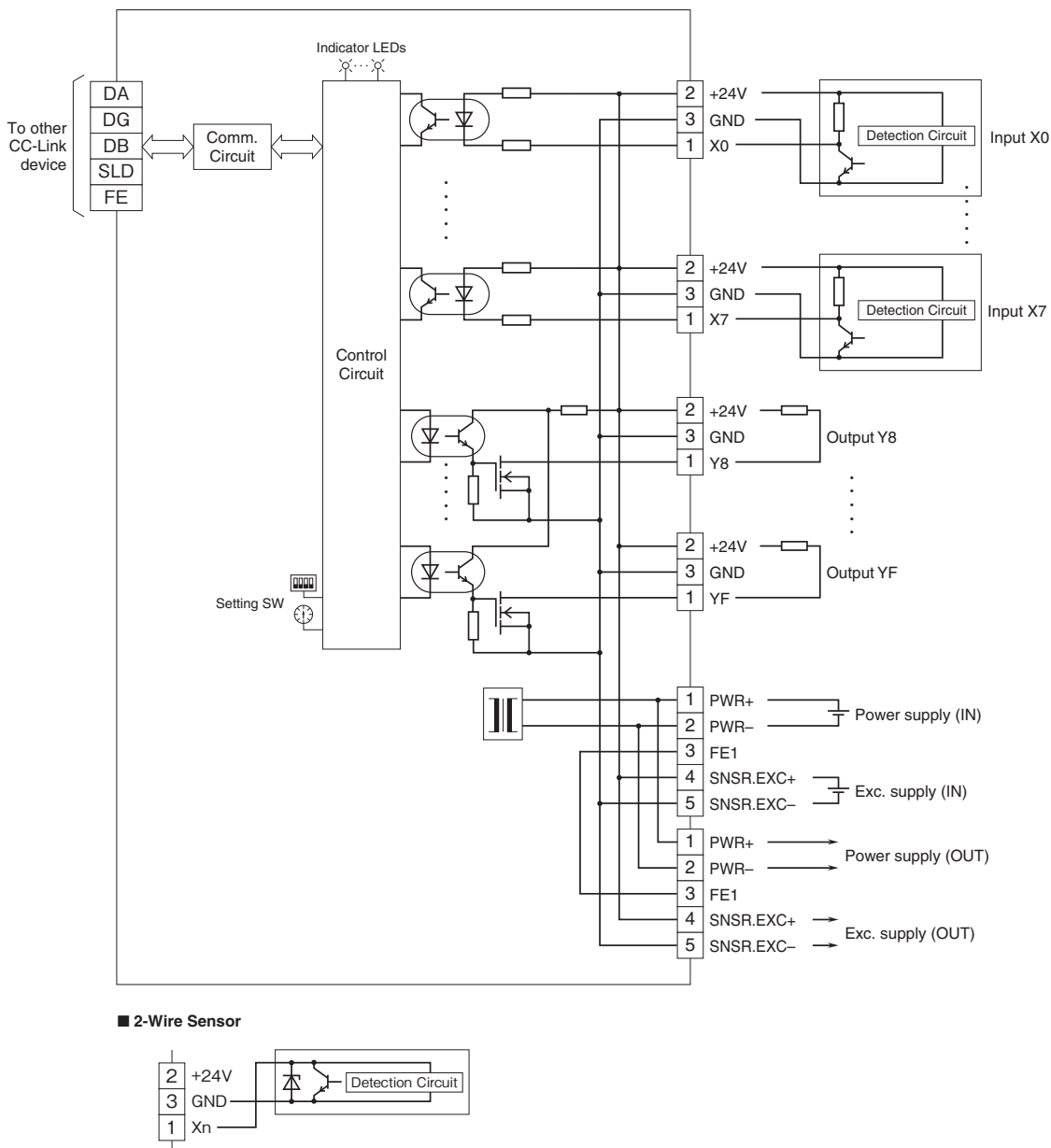
MOUNTING REQUIREMENTS unit: mm [inch]



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.