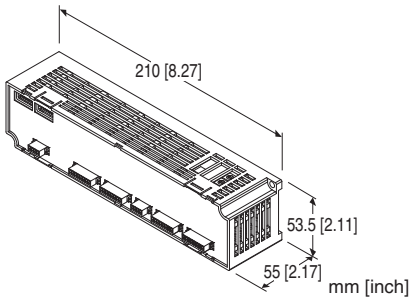
Remote I/O R7K4G Series

CC-Link I/O MODULE

(NPN transistor output, 32 points, tension clamp terminal)

Functions & Features

• Remote I/O module to input/output digital I/O signal to field bus (CC-Link)



MODEL: R7K4GC-DC32A-C-R

ORDERING INFORMATION

• Code number: R7K4GC-DC32A-C-R

I/O TYPE

DC32A: NPN transistor output, 32 points

TERMINAL BLOCK

C: Tension clamp terminal for power
Tension clamp terminal for communication
Tension clamp terminal for I/O

POWER INPUT

DC Power

R: 24 V DC

(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

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: Tension clamp terminal

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

Data allocation: 1

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: PWR, RUN, ERR, SD, RD

For details, refer to the users manual.

OUTPUT SPECIFICATIONS

Common: Negative common (NPN) per 32 points

Number of output: 32 points

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

Rated load voltage: 24 V DC ±10 %, ripple 5 %p-p max.

Rated output current: 0.1 A per point, 3.2 A per common

Residual voltage: ≤ 1.2 V

Leakage current: ≤ 0.1 mA

ON delay: ≤ 0.2 msec.

OFF delay: ≤ 0.5 msec.

Overload current protection function: Limits the current value when overcurrent is detected

Overheat protection function: Turns OFF the outputs when overheat is detected

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

INSTALLATION

Current consumption

•DC at 24 V DC: ≤ 60 mA

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 MΩ with 500 V DC

Dielectric strength: 1500 V AC @ 1 minute

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

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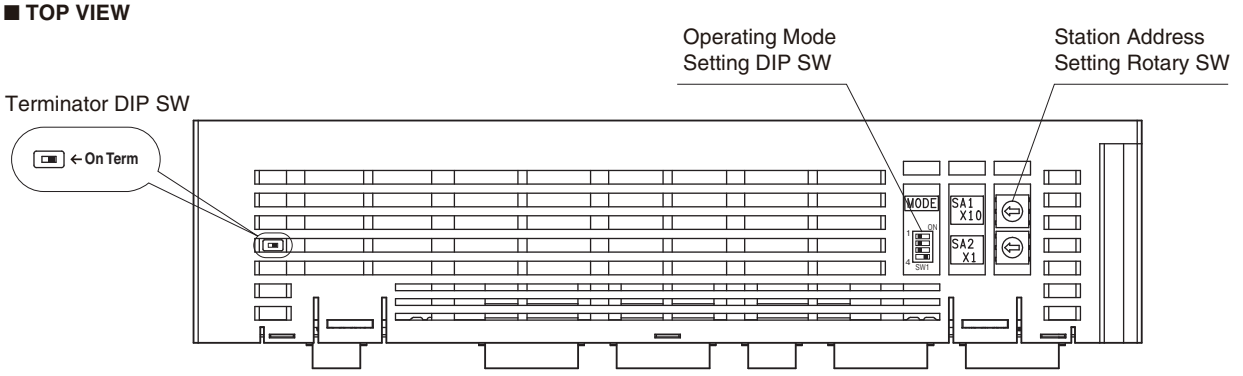
STANDARDS & APPROVALS

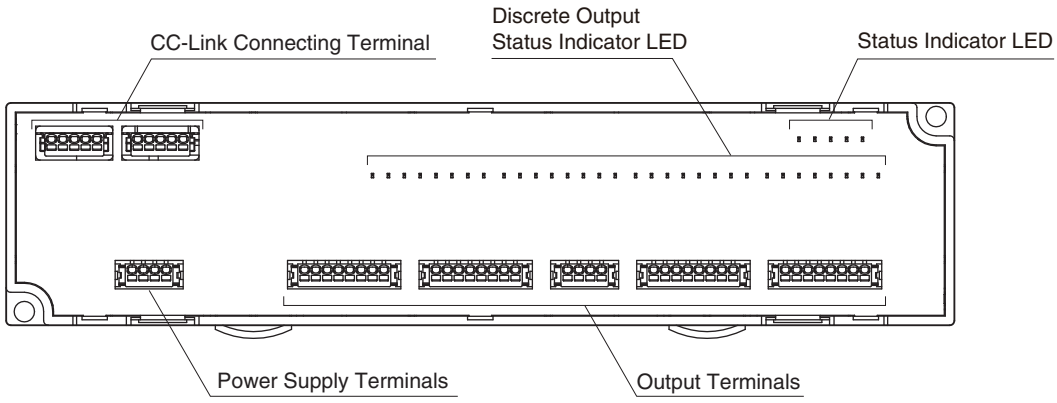
EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

EXTERNAL VIEW

■ **TOP VIEW**



■ **FRONT VIEW**



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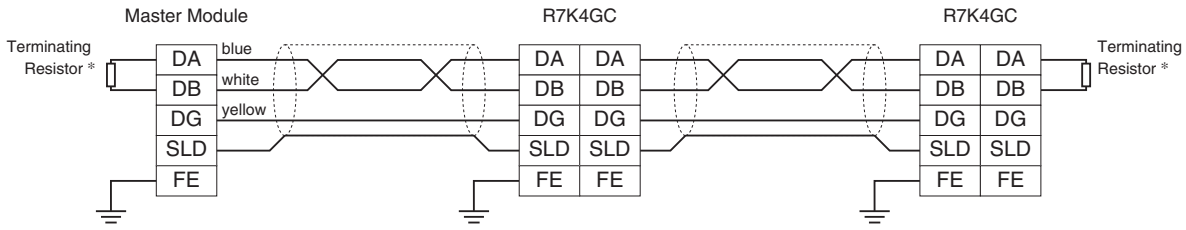
CONNECTION DIAGRAMS

■ MASTER CONNECTION

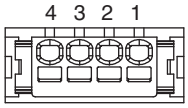


* Turn on the terminator DIP switch to activate the internal terminating resistor.

TERMINAL ASSIGNMENTS

■ POWER SUPPLY TERMINAL ASSIGNMENT

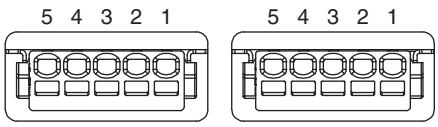
Unit side connector: PTSM0,5/4-2,5-V SMD R44 (Phoenix Contact)
Applicable wire size: 0.25 - 0.34 mm²
Stripped length: 6 mm
Recommended solderless terminal
AI0,25-6BU 0.25 mm² (Phoenix Contact)
AI0,25-6YE 0.25 mm² (Phoenix Contact)
AI0,34-6TQ 0.34 mm² (Phoenix Contact)



NO.	ID	FUNCTION
1	FE1	Grounding
2	–	Unused
3	24V	Power supply +
4	0V	Power supply –

■ CC-LINK TERMINAL ASSIGNMENT

Unit side connector: PTSM0,5/5-2,5-H SMD (Phoenix Contact)
Applicable wire size: 0.25 - 0.34 mm²
Stripped length: 6 mm
Recommended solderless terminal
AI0,25-6BU 0.25 mm² (Phoenix Contact)
AI0,25-6YE 0.25 mm² (Phoenix Contact)
AI0,34-6TQ 0.34 mm² (Phoenix Contact)



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

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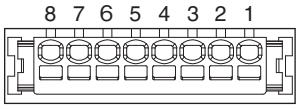
■ OUTPUT TERMINAL ASSIGNMENT

Unit side connector: PTSM0,5/8-2,5-V SMD R44 (Phoenix Contact)
Applicable wire size: 0.25 - 0.34mm²
Stripped length: 6mm
Recommended solderless terminal
AI0,25-6BU 0.25mm² (Phoenix Contact)
AI0,25-6YE 0.25mm² (Phoenix Contact)
AI0,34-6TQ 0.34mm² (Phoenix Contact)



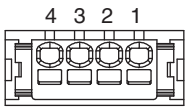
NO.	ID	FUNCTION
1	Y7	Output 7
2	Y6	Output 6
3	Y5	Output 5
4	Y4	Output 4
5	Y3	Output 3
6	Y2	Output 2
7	Y1	Output 1
8	Y0	Output 0

NO.	ID	FUNCTION
1	Y15	Output 15
2	Y14	Output 14
3	Y13	Output 13
4	Y12	Output 12
5	Y11	Output 11
6	Y10	Output 10
7	Y9	Output 9
8	Y8	Output 8

NO.	ID	FUNCTION
1	Y23	Output 23
2	Y22	Output 22
3	Y21	Output 21
4	Y20	Output 20
5	Y19	Output 19
6	Y18	Output 18
7	Y17	Output 17
8	Y16	Output 16

NO.	ID	FUNCTION
1	Y31	Output 31
2	Y30	Output 30
3	Y29	Output 29
4	Y28	Output 28
5	Y27	Output 27
6	Y26	Output 26
7	Y25	Output 25
8	Y24	Output 24

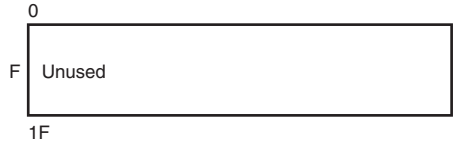
Unit side connector: PTSM0,5/4-2,5-V SMD R44 (Phoenix Contact)
Applicable wire size: 0.25 - 0.34 mm²
Stripped length: 6 mm
Recommended solderless terminal
AI0,25-6BU 0.25 mm² (Phoenix Contact)
AI0,25-6YE 0.25 mm² (Phoenix Contact)
AI0,34-6TQ 0.34 mm² (Phoenix Contact)



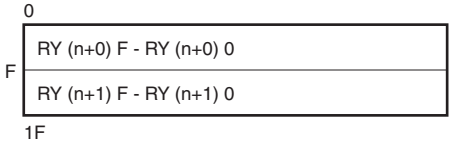
NO.	ID	FUNCTION
1	V+	Exc. supply +
2	V+	Exc. supply +
3	V-	Exc. supply -
4	V-	Exc. supply -

DATA ALLOCATION

Interval timed Response (X)



Refresh Data (Y)



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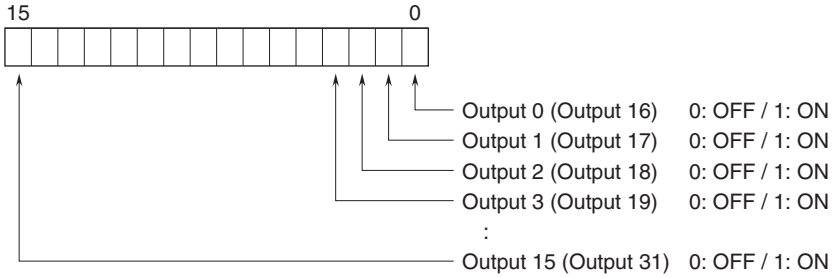
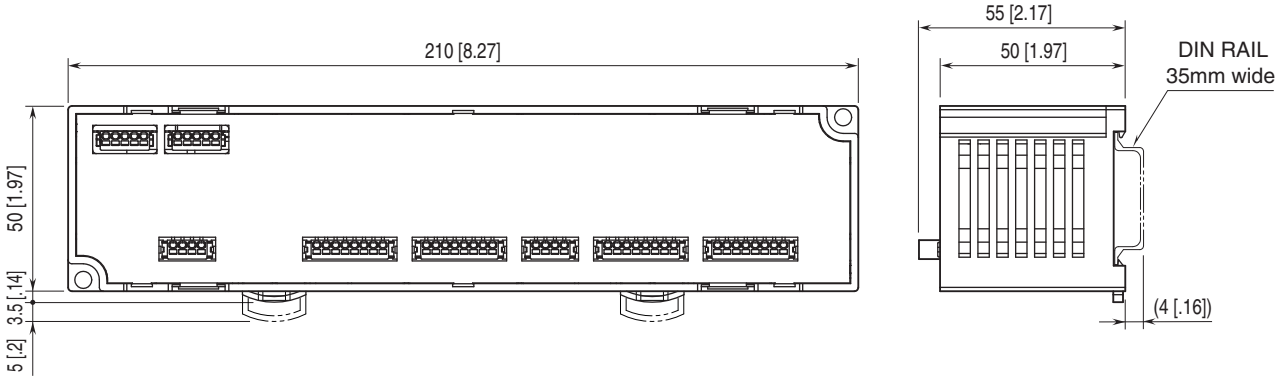
I/O DATA DESCRIPTIONS

■ **DISCRETE OUTPUT**



EXTERNAL DIMENSIONS unit: mm [inch]



MOUNTING REQUIREMENTS unit: mm [inch]

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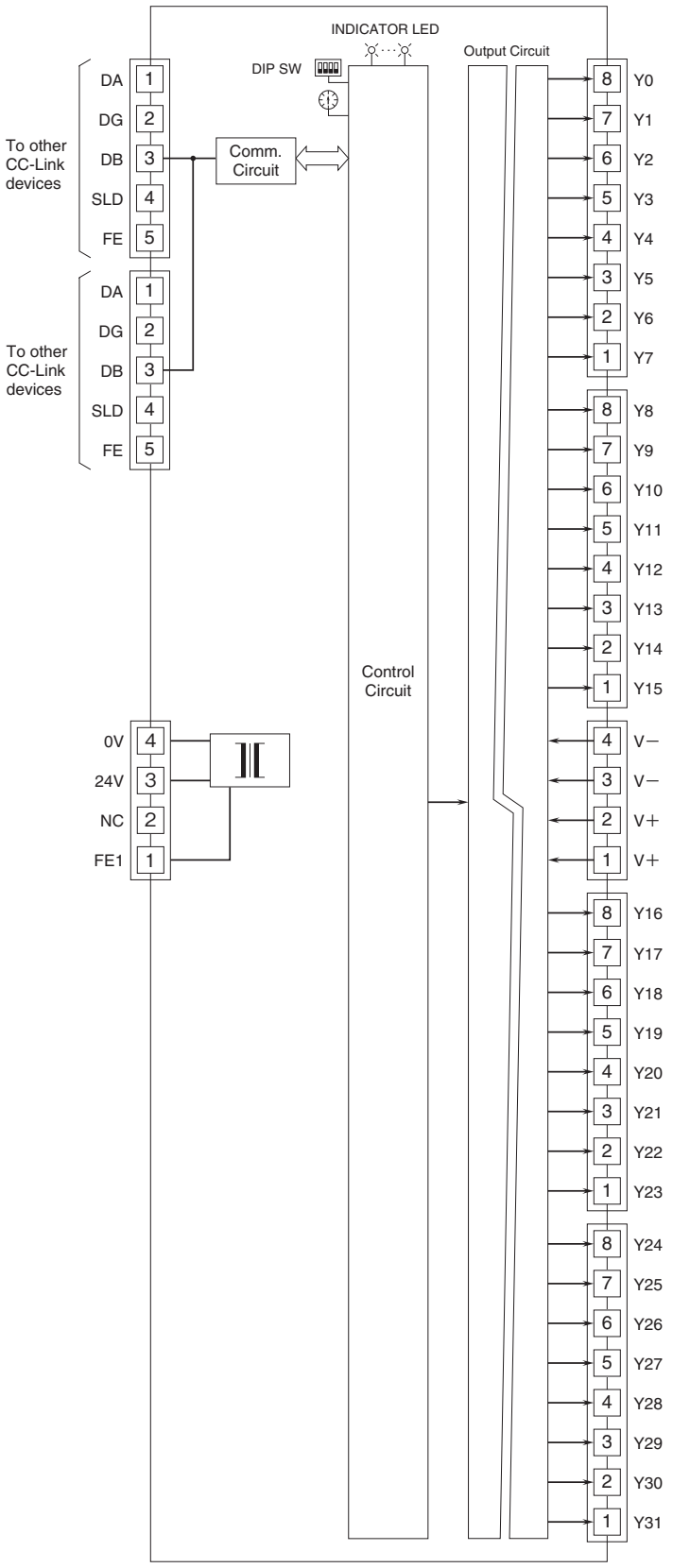
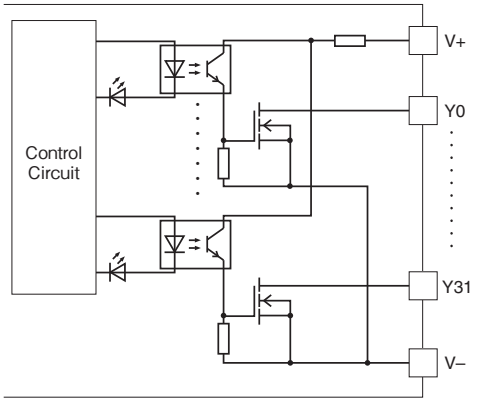
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

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

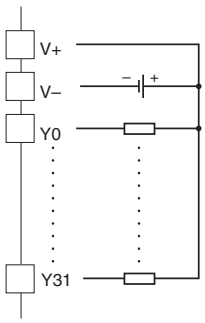
Caution: FE1 terminal is NOT a protective conductor terminal.



■ **Output Circuit**



■ **Output Connection Examples**



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⚠ Specifications are subject to change without notice.

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