Remote I/O R8 Series

POWER/NETWORK MODULE

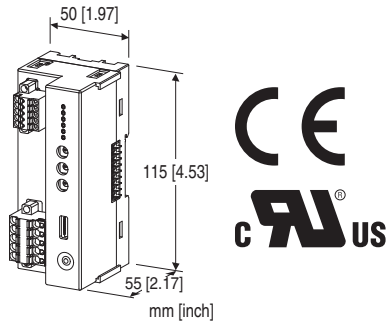
(CC-Link Ver.2.00; for 64-point analog signals)

Functions & Features

- Free combination of analog and discrete I/O
- Space-saving

Typical Applications

- Remote I/O for DCS and PLC



MODEL: R8–NC3–R[1]

ORDERING INFORMATION

- Code number: R8-NC3-R[1]

Specify a code from below for [1].
(e.g. R8-NC3-R/UL/Q)

- Specify the specification for option code /Q
(e.g. /C01)

I/O TYPE

NC3: CC-Link

POWER INPUT

DC power
R: 24 V DC
(Operational voltage range: ±10 %; ripple 10 %p-p max.)

[1] OPTIONS (multiple selections)

Standards & Approvals
blank: CE marking
/UL: UL approval, CE marking
Other Options
blank: none
/Q: Option other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to our web site.)
/C01: Silicone coating
/C02: Polyurethane coating

RELATED PRODUCTS

- PC Configurator cable (model: MCN-CON or COP-US)
- PC configurator software (model: R8CFG)

Downloadable at our web site.

PACKAGE INCLUDES...

- Protective cover

GENERAL SPECIFICATIONS

Connection

- **Power input**: Tension clamp (Front Twin connection)
  Applicable wire size: 0.2 - 2.5 mm^2
  Stripped length: 10 mm
- **CC-Link**: Tension clamp (Front Twin connection)
  Applicable wire size: 0.2 - 1.5 mm^2
  Stripped length: 10 mm
- **Internal bus or internal power or excitation supply**: Via connector

Max. number of I/O modules: 16
(Max. consumption current of I/O modules: 1.6 A)
Isolation: CC-Link to internal bus or internal power or power input to exc. supply to FE1
Status indicators: Power, Run, Error, SD, RD
Data allocation: Mode 1, 2

CC-Link COMMUNICATION

Protocol: CC-Link. Conforms to Version 2.00
Device type: Remote device station
Required nodes: 4 (112 I/O points, 16 words) × m (m = Cyclic expansion setting)
Network cable: CC-Link cable designated by Mitsubishi Electric
Cyclic expansion: 2, 4 (Function selected with DIP SW)
Station address setting: Rotary switch; 1 to 64
Baud rate setting: Rotary switch
156kbps, 625kbps, 2.5Mbps, 5Mbps, 10Mbps
Terminating resistor: Built-in (DIP Switch, default: disable)

INSTALLATION

Power consumption

- **DC**: ≤ 12 W 24 V DC (@ internal power max. current 1.6 A)

Internal power supply (power supply for I/O module):

- DC power supply: 5 V DC
- Current capacity: 1.6 A

Excitation supply output (excitation for I/O module)

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•**DC**: 24 V DC ±10 %
•**Operational current:** 10 A
(From power supply (excitation supply) connector, via connector for internal bus, supplied to each I/O module. Power output current consumption must be under operational current.)
Operating temperature: 0 to 55°C (32 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Atmosphere: No corrosive gas or heavy dust
Mounting: DIN rail
Weight: 180 g (0.40 lb)

PERFORMANCE

Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 500 V AC @ 1 minute
(CC-Link to internal bus or internal power or power input to exc. supply to FE1)

STANDARDS & APPROVALS

EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive
Approval:
UL/C-UL general safety requirements
(UL 61010-1, CAN/CSA-C22.2 No.61010-1-12)
(UL 61010-2-201, CAN/CSA-C22.2 No.61010-2-201)
Note 1: Use the power supply of condition described in the instruction manual when using as conformity with UL/C-UL.
Note 2: Excitation supply is not available when using as conformity with UL/C-UL.

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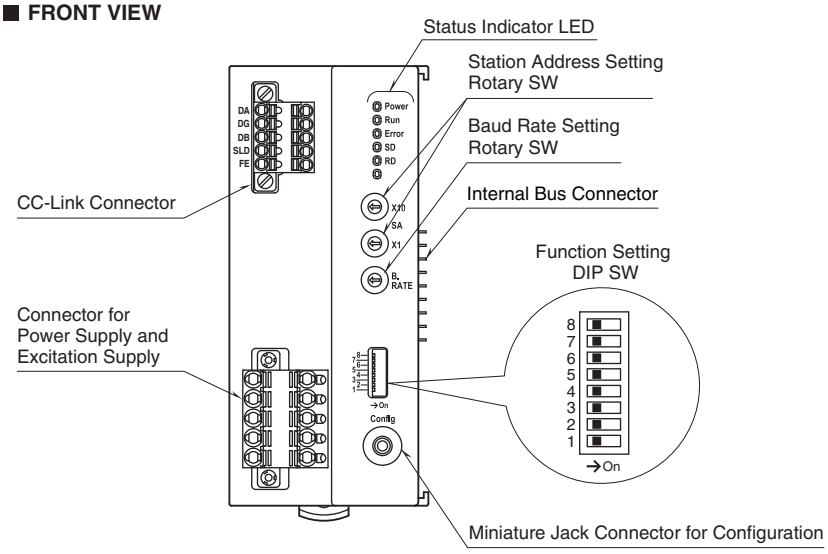
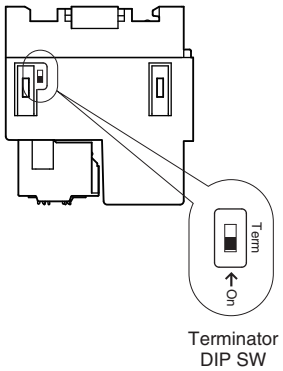
EXTERNAL VIEW

■ **FRONT VIEW**



■ **TOP VIEW**



■ **STATUS INDICATOR LED**

ID	COLOR	FUNCTION
Power	Green	ON when the internal 5V power is in normal status.
Run	Green	ON with normal communication *1
Error	Red	ON when abnormal data is received.
SD	Green	ON with data transmitting
RD	Green	ON with data receiving

*1. Run LED turns off when no command is received from the master device.

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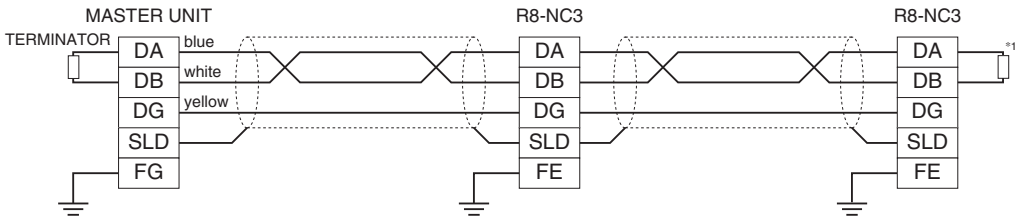
CONNECTION DIAGRAMS

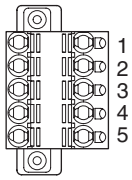
■ MASTER CONNECTION



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

■ POWER SUPPLY, EXCITATION SUPPLY CONNECTOR TERMINAL ASSIGNMENT

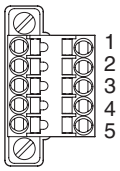
Printed-circuit board connector (Phoenix Contact)
Unit side connector: MSTBV2,5/5-GF-5,08AU
Cable side connector: TFKC2,5/5-STF-5,08AU



PIN No.	ID	FUNCTION
1	24V	Power supply 24V DC
2	0V	Power supply 0V DC
3	+	Excitation supply 24V DC
4	–	Excitation supply 0V DC
5	FE1	Grounding

■ NETWORK CONNECTOR ASSIGNMENT

Printed-circuit board connector (Phoenix Contact)
Unit side connector: MC1,5/5-GF-3,5
Cable side connector: TFMC1,5/5-STF-3,5



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

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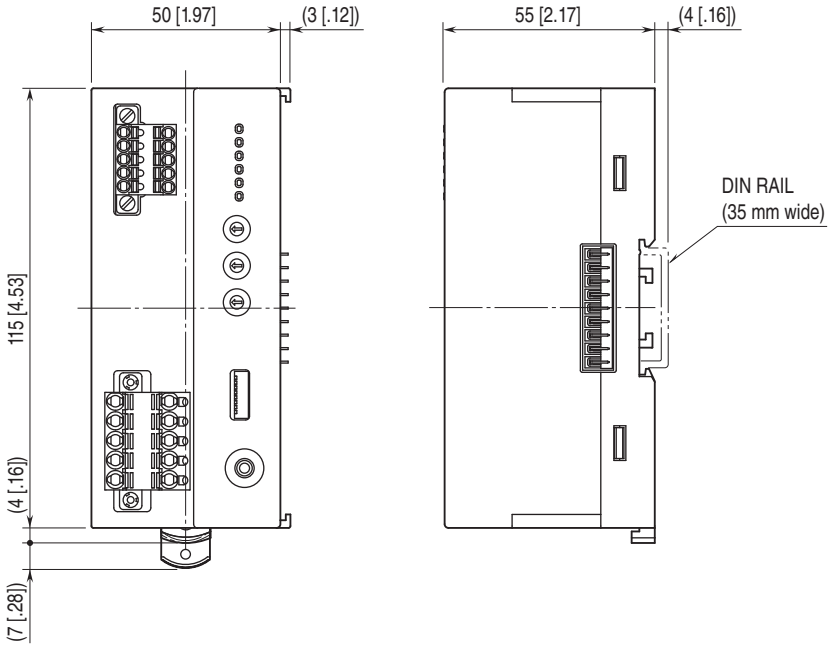
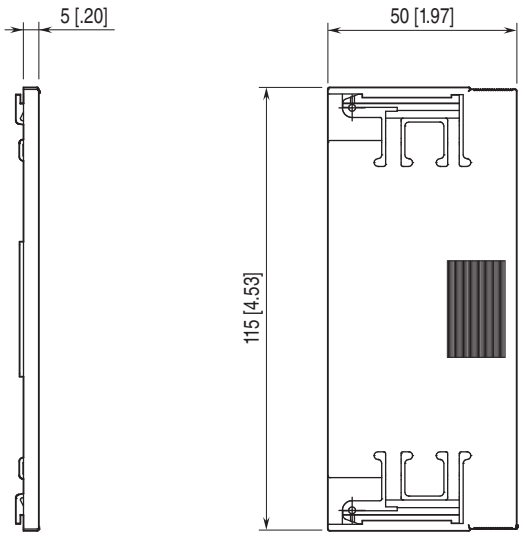
EXTERNAL DIMENSIONS unit: mm [inch]

■UNIT



■PROTECTIVE COVER



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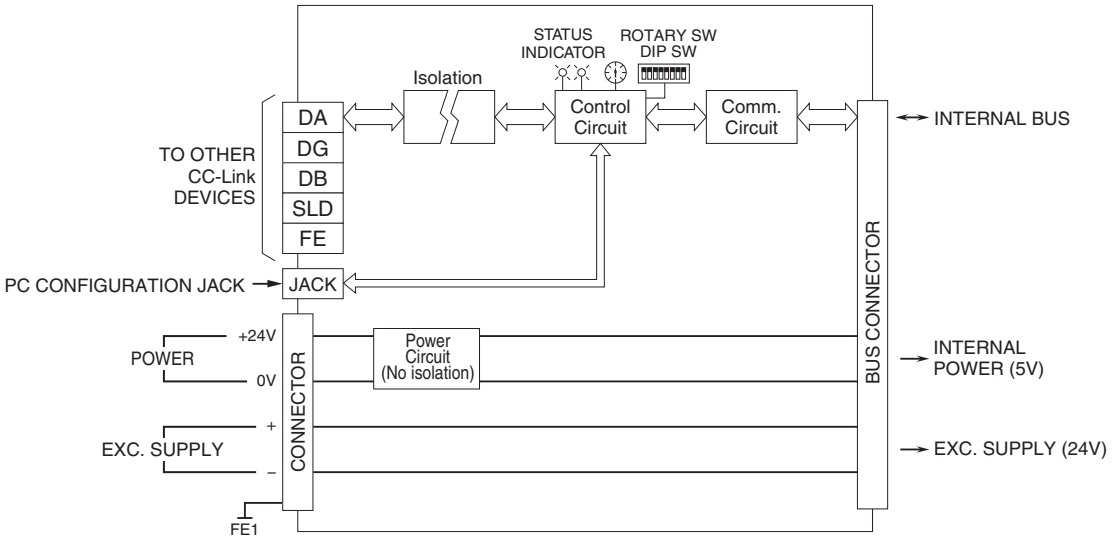
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

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

Caution: FE1 terminal is NOT a protective conductor terminal.



⚠ Specifications are subject to change without notice.

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