Remote I/O R8 Series

(No. ESU-9625)

ETHERNET POWER/NETWORK MODULE

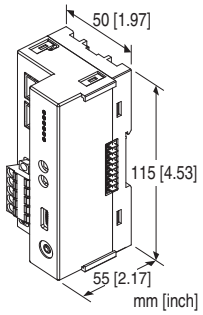
(Modbus/TCP)

Functions & Features

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

Typical Applications

- Remote I/O for PLC and PC



CE

MODEL: R8–NE1–R[1]

ORDERING INFORMATION

- Code number: R8-NE1-R[1]

Specify a code from below for [1].
(e.g. R8-NE1-R/Q)

- Specify the specification for option code /Q

(e.g. /C01/SET)

MODULE TYPE

NE1: Ethernet (Modbus/TCP)

POWER INPUT

DC Power

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

[1] OPTIONS

blank: none
/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to our web site.)
/C01: Silicone coating
/C02: Polyurethane coating
EX-FACTORY SETTING
/SET: Preset according to the Ordering Information Sheet

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 or excitation supply**: Tension clamp (front twin connection)
  Applicable wire size: 0.2 - 2.5 mm^2
  Stripped length: 10 mm
- **Ethernet**: RJ-45 modular jack
- **Internal bus or internal power or excitation supply**: Via internal bus connector

Max. number of I/O modules: 16
(Max. consumption current of I/O modules: 1.6 A)
Isolation: Ethernet or FE1 to internal bus or internal power or power input to excitation supply
Status indicators: Power, RUN, ERR, LINK1, LINK2, LINK100
Data allocation: Mode 1, 2
Configurator connection: 2.5 dia. miniature jack

ETHERNET COMMUNICATION

Communication Standard: IEEE 802.3u
Transmission: 10BASE-T, 100BASE-TX
Baud rate: 10/100 Mbps (Auto Negotiation function)
Protocol: Modbus/TCP
Data: RTU (Binary)
Max. number of socket connections: 2
Transmission media: 10BASE-T (STP, Category 5) 100BASE-TX (STP, Category 5e)
Max. length of fieldbus segment: 100 meters
Ethernet indicator LED: LINK, LINK2, LINK100
IP address: 192.168.0.1 (factory setting)
Selectable with PC Configurator Software (model: R8CFG)
(rotary switch: 00)
Only the host address of IP address is selectable with rotary switch (rotary switch: 01 - FE)
DHCP client function (rotary switch: FF)
Subnet mask: 255.255.255.0 (factory setting)
Configurable via the PC configurator software (model: R8CFG).
Default gateway: 192.168.0.100 (factory setting)
Configurable via the PC configurator software (model: R8CFG).

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Port No.: 502
Set the port number to 502 when connecting via Modbus/TCP.

INSTALLATION

Power consumption
•**DC**: Approx. 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)
• **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: -10 to +55°C (14 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Atmosphere: No corrosive gas or heavy dust
Mounting: DIN rail
Weight: 170 g (0.37 lb)

PERFORMANCE

Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 500 V AC @ 1 minute
(Ethernet or FE1 to internal bus or internal power or power input to excitation supply)

STANDARDS & APPROVALS

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

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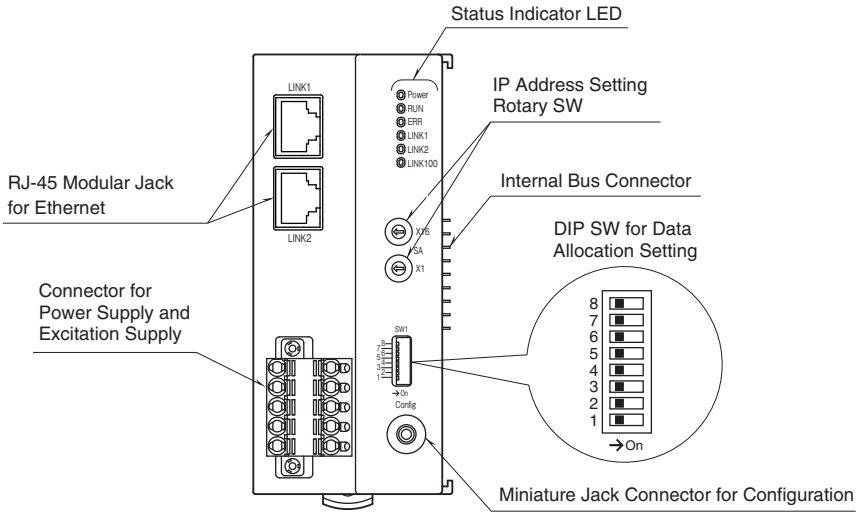
EXTERNAL VIEW



■ STATUS INDICATOR LED

ID	COLOR	FUNCTION
Power	Green	ON with normal internal power
RUN	Green	ON with normal communication
ERR	Red	ON with device error
LINK1	Green	ON with communication line 1 is in Link status.
LINK2	Green	ON with communication line 2 is in Link status.
LINK100	Green	ON with 100BASE communication

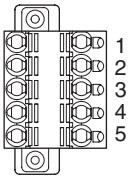
CONNECTION DIAGRAMS

■ 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

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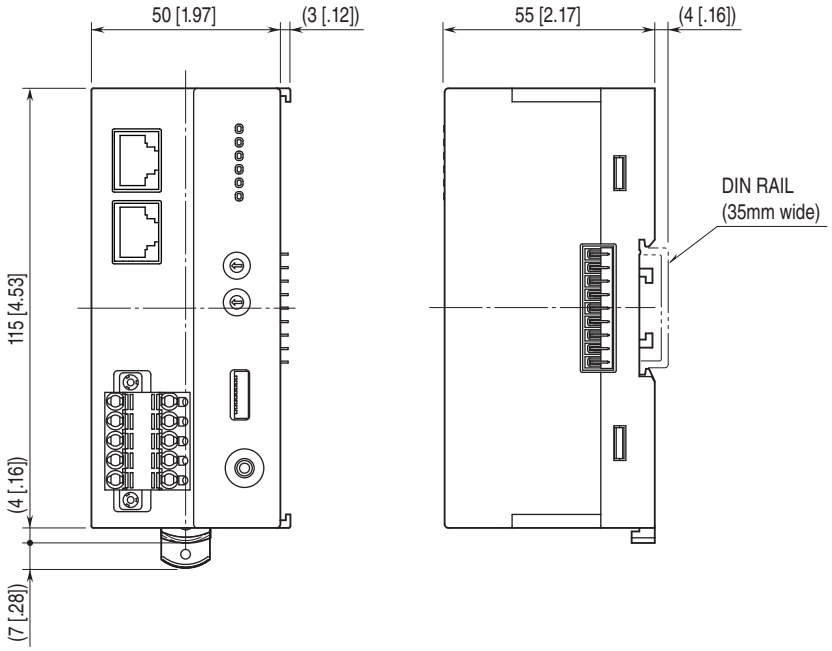
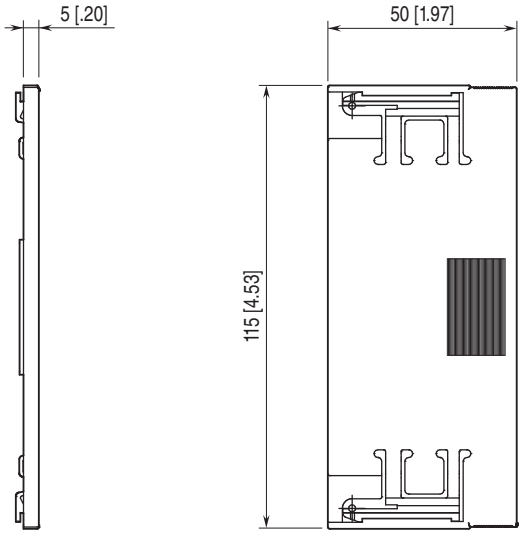
EXTERNAL DIMENSIONS unit: mm [inch]

■ **UNIT**



■ **PROTECTIVE COVER**



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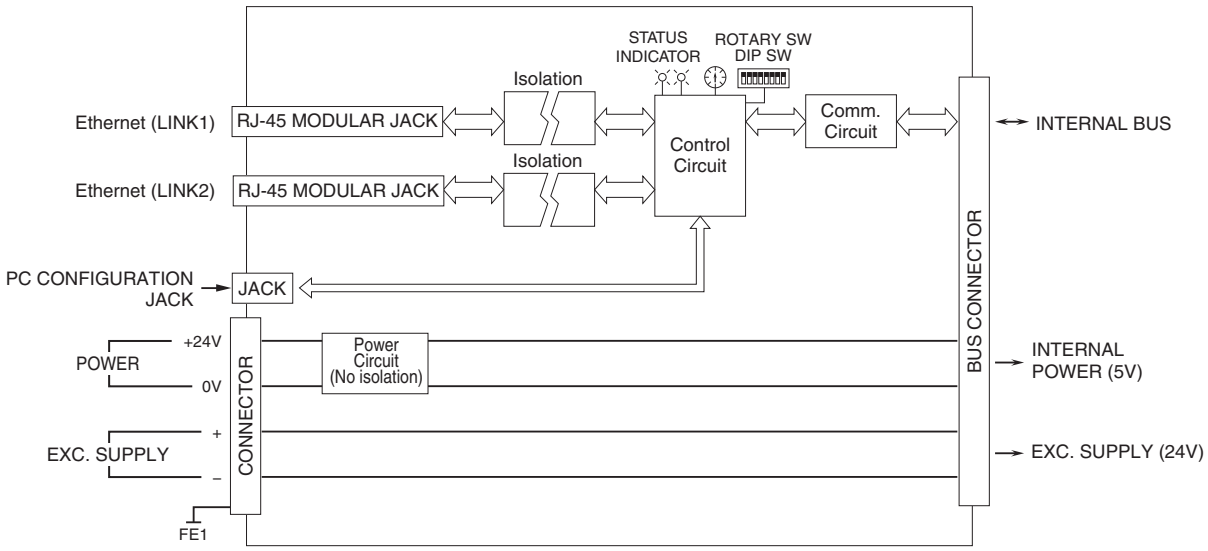
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

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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