

Remote I/O R8 Series

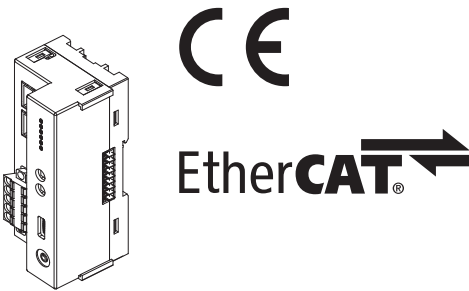
POWER/NETWORK MODULE

(EtherCAT)

Functions & Features

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

EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.



MODEL: R8-NECT1-R[1]

ORDERING INFORMATION

- Code number: R8-NECT1-R[1]
- Specify a code from below for [1].
(e.g. R8-NECT1-R/Q)
- Specify the specification for option code /Q
(e.g. /C01)

MODULE TYPE

NECT1: EtherCAT

POWER INPUT

DC power
R: 24 V DC
(Operational voltage range: $\pm 10\%$; 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

- PC Configurator cable (model: 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 mm²

Stripped length: 10 mm

- **EtherCAT:** RJ-45 connector
- **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: EtherCAT to internal bus or internal power or power input to excitation supply to FE1

Status indicators: Power, RUN, ERR, L/A IN, L/A OUT

Communication failure detection time: 100 msec. (fixed)
(Time between LAN failure and operation of I/O module at communication failure)

EtherCAT COMMUNICATION

Standard: IEEE 802.3u

Transmission type: 100BASE-TX

Transmission speed: Full-duplex 100 Mbps

Transmission media: 100BASE-TX (STP cable; Category 5e)

Maximum internode length: 100 meters

Fixed address: Set with rotary switches
(The master must support MDP.)

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 $\pm 10\%$
- **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: 180 g (0.40 lb)

PERFORMANCE

Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC

Dielectric strength: 1500 V AC @ 1 minute

(EthrtCAT to internal bus or internal power or power input to excitation supply to FE1)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

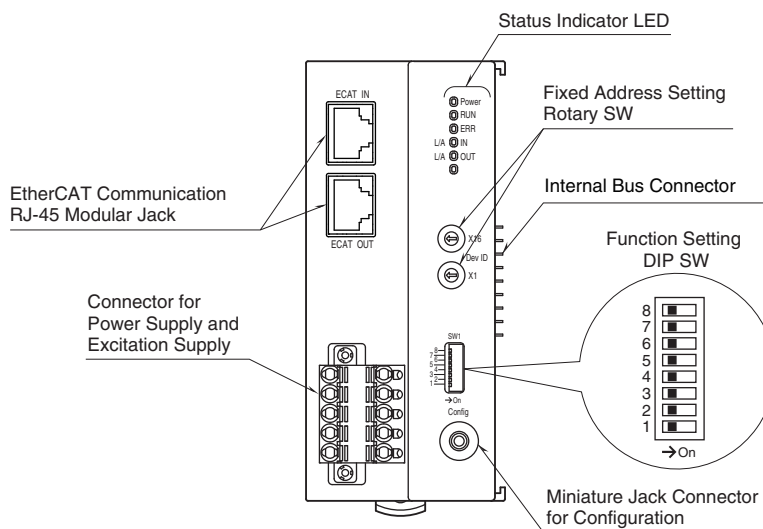
EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

EXTERNAL VIEW

FRONT VIEW



STATUS INDICATOR LED

ID	COLOR	FUNCTION
Power	Green	On at internal power supply
RUN	Green	On or blink depending upon state
ERR	Red	On or blink at error
L/A IN	Green	On or blink depending upon IN port
L/A OUT	Green	On or blink depending upon OUT port

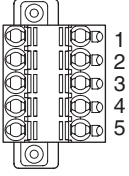
CONNECTION DIAGRAMS

■ POWER SUPPLY, EXCITATION SUPPLY CONNECTOR TERMINAL ASSIGNMENT

Printed-circuit board connector (Phoenix Contact)

Unit side connector: MSTBV2,5/5-GF-5,08AU

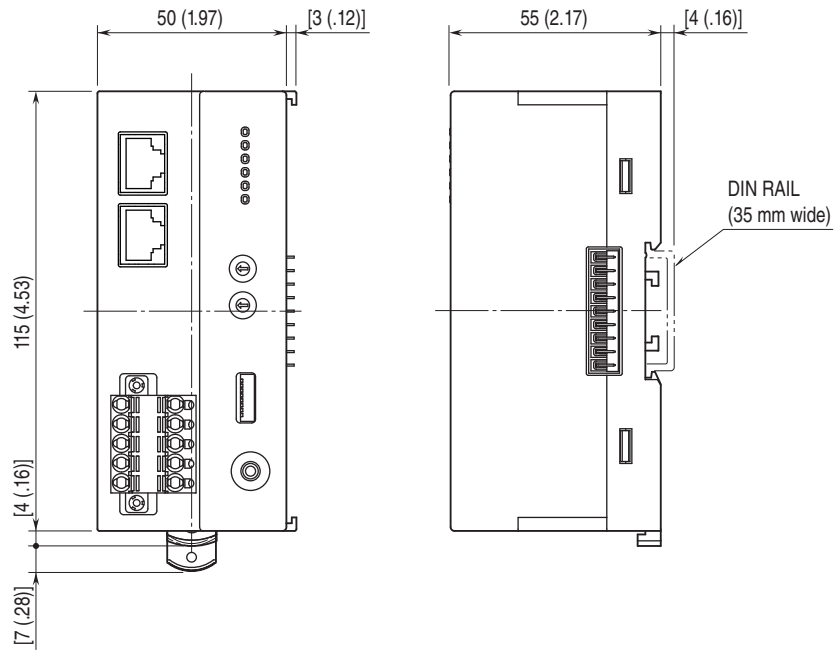
Cable side connector: TFKC2,5/5-STF-5,08AU



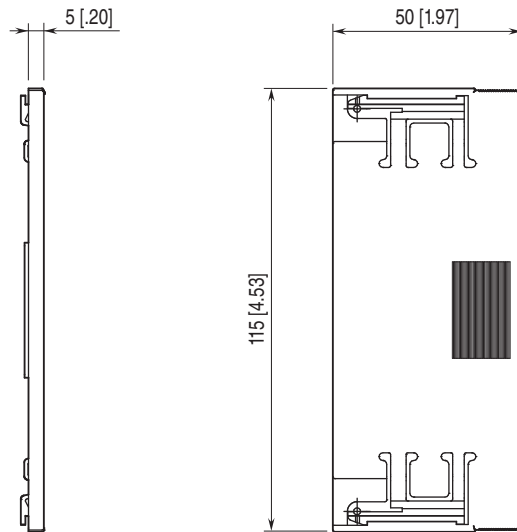
PIN No.	ID	FUNCTION
1	24V	Power supply 24V DC
2	0V	Power supply 0V DC
3	+	Excitation supply 24V DC
4	-	Excitation supply 0V DC
5	FE1	Grounding

EXTERNAL DIMENSIONS unit: mm [inch]

■UNIT



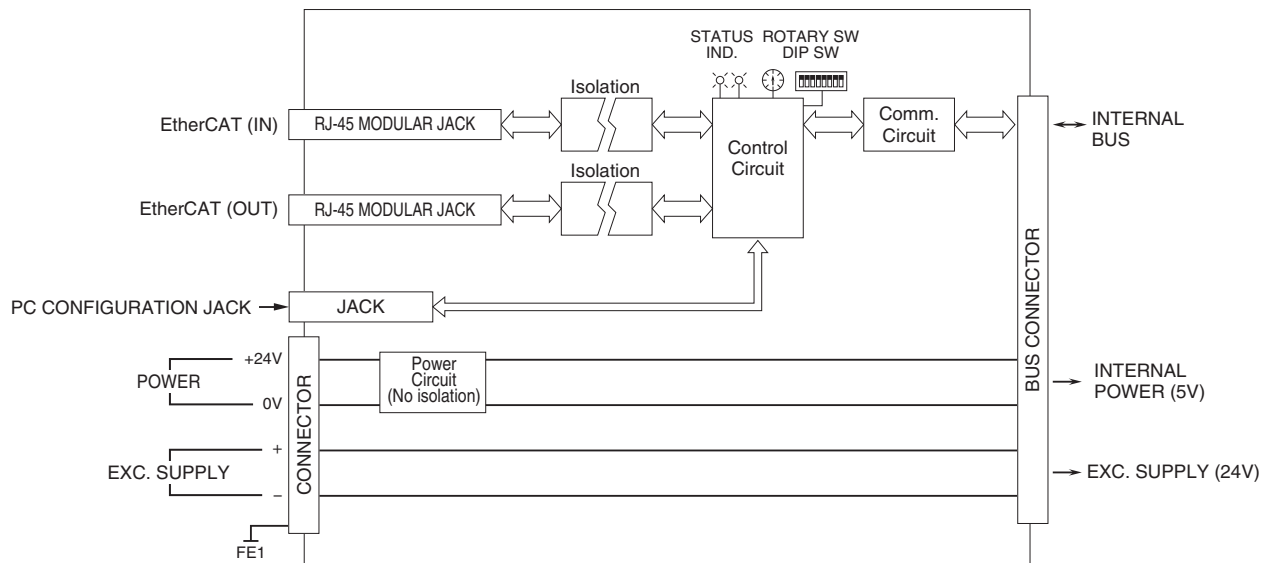
■PROTECTIVE COVER



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.