

Remote I/O R30 Series

EtherCAT INTERFACE I/O MODULE

(EtherCAT)

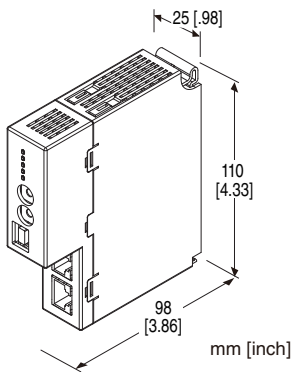
Functions & Features

- Serves as a gateway for allowing EtherCAT data to be handled by network modules that use different protocols.
- Recognized as an analog I/O mixed module by the network modules.
- Works as a slave station on EtherCAT in the same manner as R30NECT1.

Typical Applications

- A gateway between EtherCAT and CC-Link IE Field.

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



MODEL: R30GECT1S[1]

ORDERING INFORMATION

- Code number: R30GECT1S[1]
Specify a code from below for [1].
(e.g. R30GECT1S/Q)
- Specify the specification for option code /Q
(e.g. /C01)

COMMUNICATION MODE

S: Single

[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

CAUTION

Please use this unit with a network module (model: R30NECT1) of firmware version V1.04.10 or higher, and a network module (model: R30NCIE1) of firmware version V1.01.13 or higher.

RELATED PRODUCTS

- PC configurator software (model: R30CFG)
- ESI file

The configurator software and ESI files are downloadable at our web site.

Use a commercially available Mini-B USB cable to connect the unit to a PC.

GENERAL SPECIFICATIONS

Connection

EtherCAT: RJ-45 connector

Internal bus: Via the Installation Base (model: R30BS)

Internal power: Via the Installation Base (model: R30BS)

Isolation: EtherCAT to internal bus or internal power

Internal bus communication cycle: Approx. 1 msec.

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

(Refer to the instruction manual.)

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

Current consumption : 80 mA

Operating temperature: -10 to +55°C (14 to 131°F)

Storage temperature: -20 to +65°C (-4 to +149°F)

Operating humidity: 10 to 90 %RH (non-condensing)

Atmosphere: No corrosive gas or heavy dust

Mounting: Installation Base (model: R30BS)

Weight: 110 g (0.24 lb)

PERFORMANCE

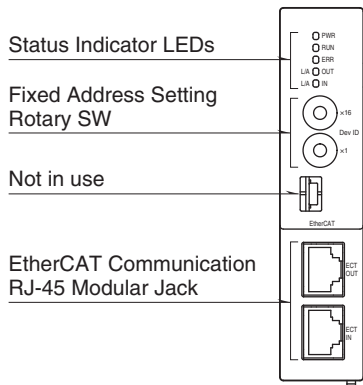
Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute (EtherCAT to internal bus or internal power)
 1500 V AC @ 1 minute (power input to FE; isolated on the power supply module)

STANDARDS & APPROVALS

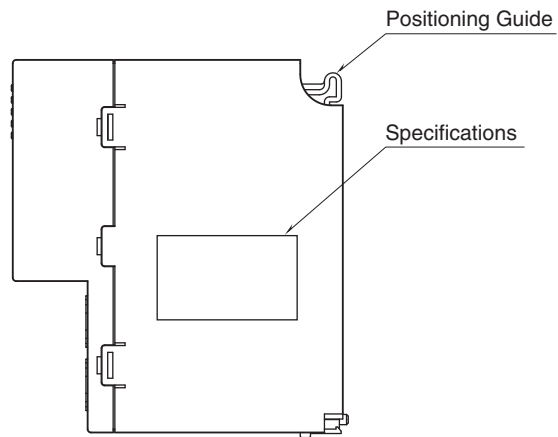
EU conformity:
 EMC Directive
 EMI EN 61000-6-4
 EMS EN 61000-6-2
 RoHS Directive

EXTERNAL VIEW

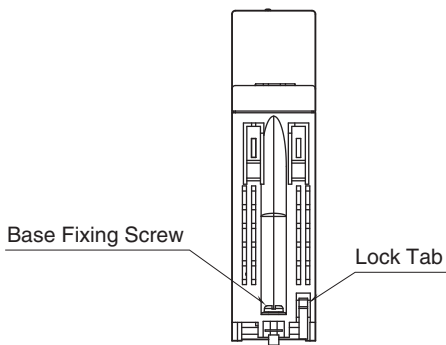
FRONT VIEW



SIDE VIEW



BOTTOM VIEW

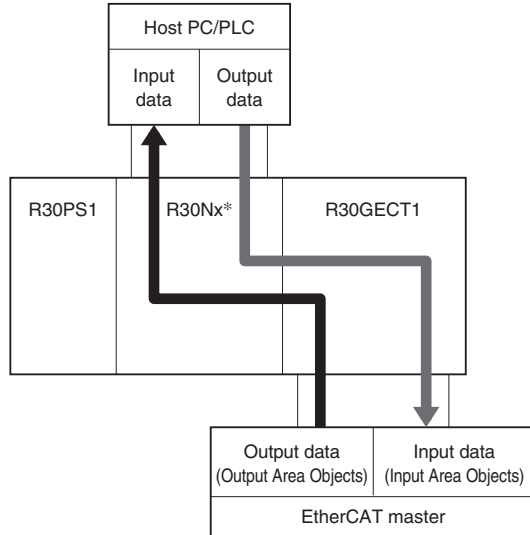


TRANSMISSION DATA DESCRIPTIONS

Number of transmission data: 4 points (4 words) for input; 4 points (4 words) for output

This unit is equivalent to an analog I/O mixed module (AIO4) of R30 series, and is recognized as an I/O module by network modules (model: R30NCIE1, etc.).

• DATA FLOW



* R30Nx: R30 Network module

■ FLOW OF OUTPUT DATA

[EtherCAT master] → [R30GECT1] → [R30 internal bus]
→ [R30 Network module] → [Host PC/PLC]

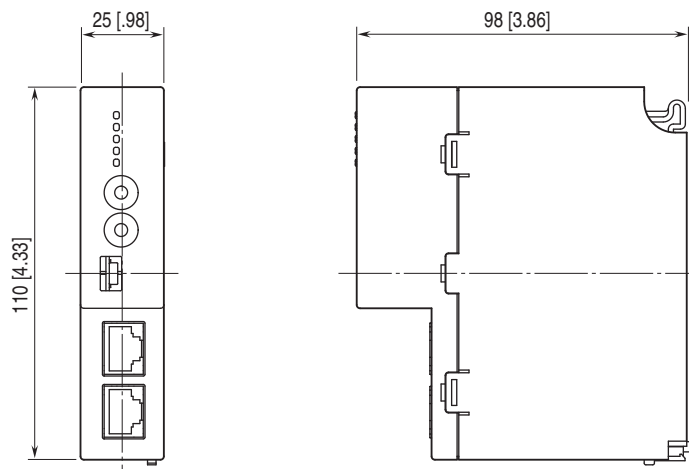
Output data (Output Area Objects) from EtherCAT master is transmitted as Input data to Host PC/PLC.

■ FLOW OF INPUT DATA

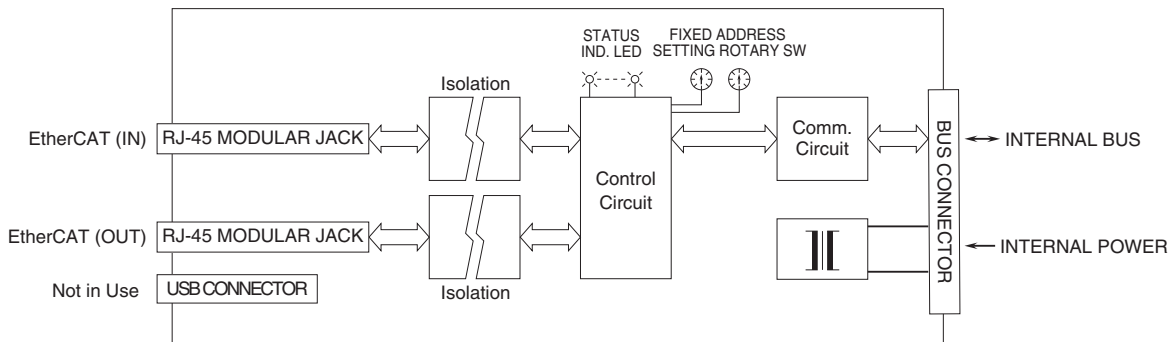
[Host PC/PLC] → [R30 Network module] → [R30 internal bus]
→ [R30GECT1] → [EtherCAT master]

Output data from Host PC/PLC is transmitted as Input data (Input Area Objects) to EtherCAT master.

EXTERNAL DIMENSIONS unit: mm [inch]

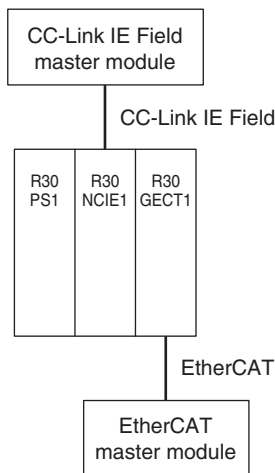


SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



SYSTEM CONFIGURATION EXAMPLES

The below figure shows a system configuration example in which the R30GECT1 works as a gateway and converts EtherCAT data into CC-Link IE Field data.



Specifications are subject to change without notice.