

## Remote I/O R30 Series

### EtherCAT INTERFACE I/O MODULE

(EtherCAT)

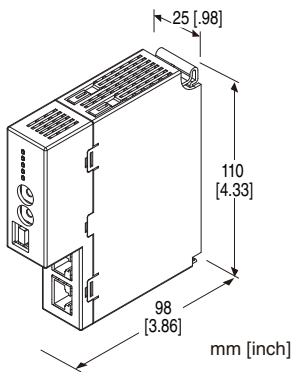
#### Functions & Features

- 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.



### SPECIFICATIONS OF OPTION: Q

**COATING (For the detail, refer to M-System's 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 M-System's 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)

## 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)

## PERFORMANCE

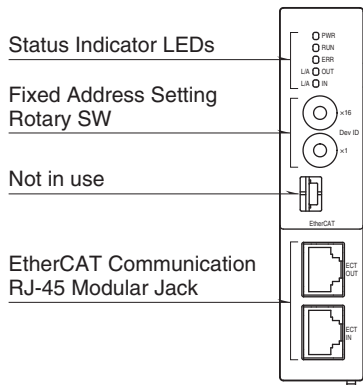
**Insulation resistance:**  $\geq 100 \text{ M}\Omega$  with 500 V DC  
**Dielectric strength:** 1500 V AC @ 1 minute (EtherCAT to internal bus or internal power)  
 1500 V AC @ 1 minute (power input to FE; isolated on the power supply module)

## STANDARDS & APPROVALS

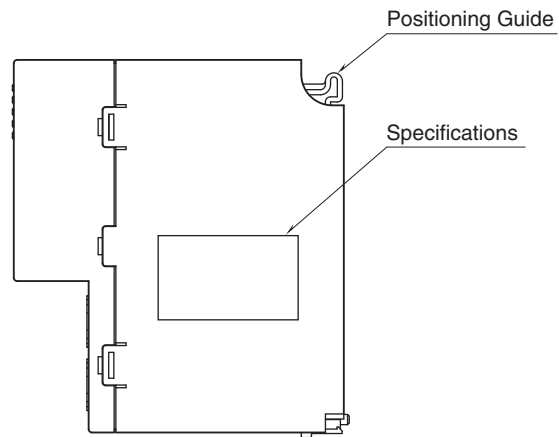
**EU conformity:**  
 EMC Directive  
 EMI EN 61000-6-4  
 EMS EN 61000-6-2  
 RoHS Directive

## EXTERNAL VIEW

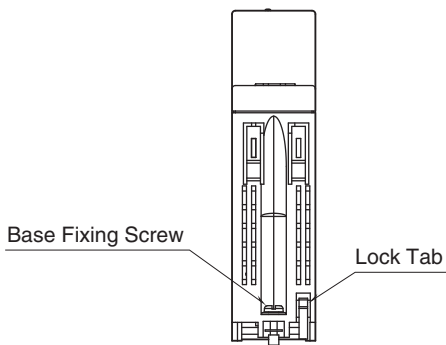
### FRONT VIEW



### SIDE VIEW



### BOTTOM VIEW

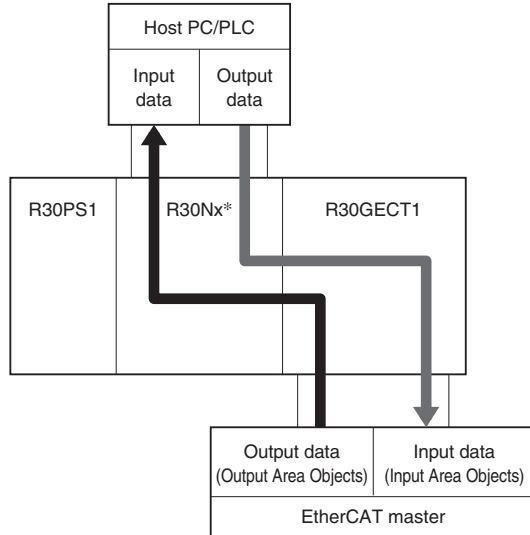


## TRANSMISSION DATA DESCRIPTIONS

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]

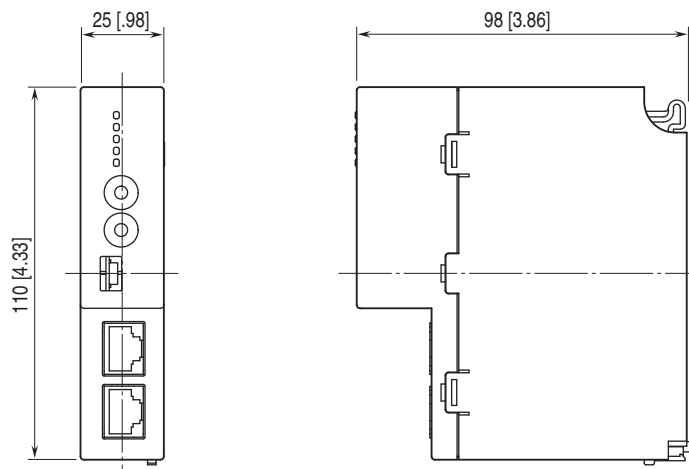
Output data (Output Area Objects) from EtherCAT master is transmitted as Input data to Host PC/PLC.

### ■ FLOW OF INPUT DATA

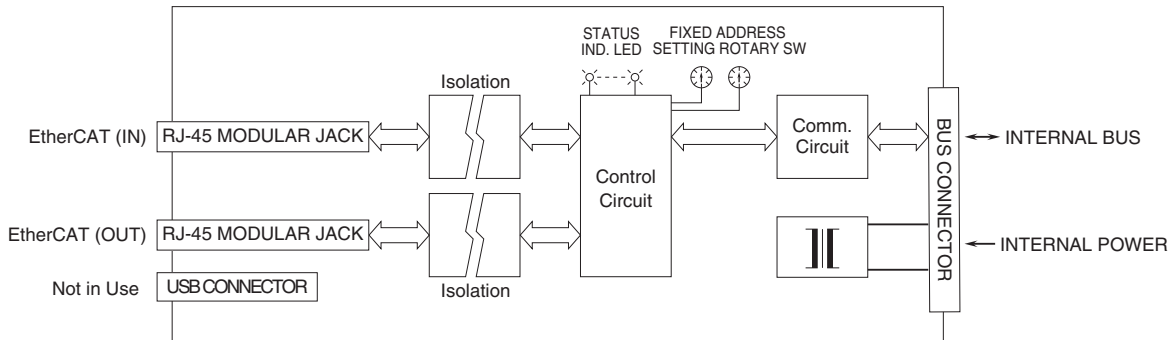
[Host PC/PLC] → [R30 Network module] → [R30 internal bus]  
→ [R30GECT1] → [EtherCAT master]

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

## EXTERNAL DIMENSIONS unit: mm [inch]

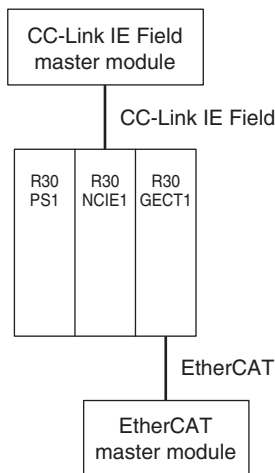


## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



## 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.