Remote I/O R30 Series

EtherCAT INTERFACE I/O MODULE

(EtherCAT)

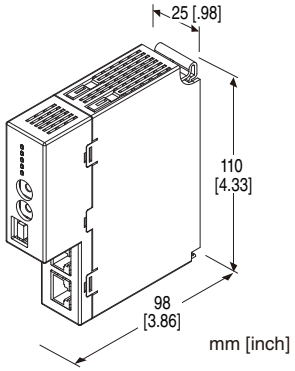
Functions & Features

• 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 Filed.

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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 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)

PERFORMANCE

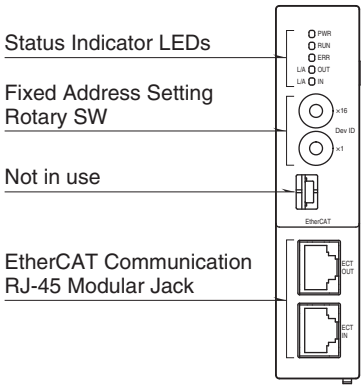
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute (EtherCAT to internal bus or internal power)
1500 V AC @ 1 minute (power input to FE; isolated on the power supply module)

STANDARDS & APPROVALS

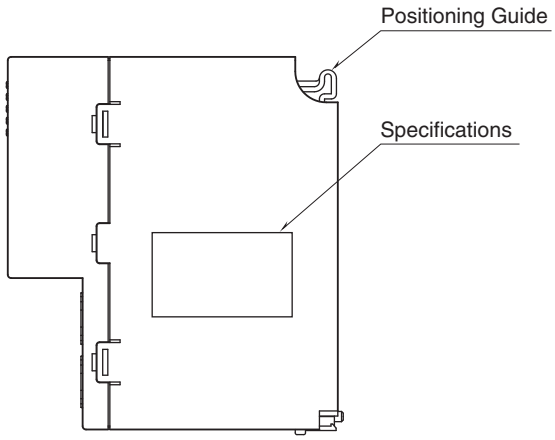
EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

EXTERNAL VIEW

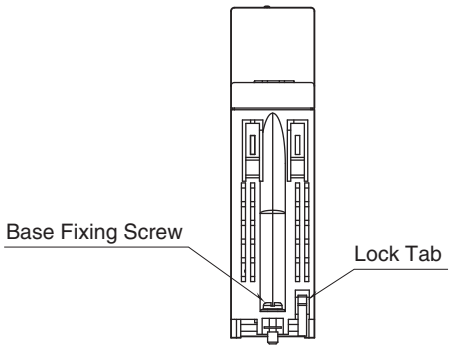
■ **FRONT VIEW**



■ **SIDE VIEW**



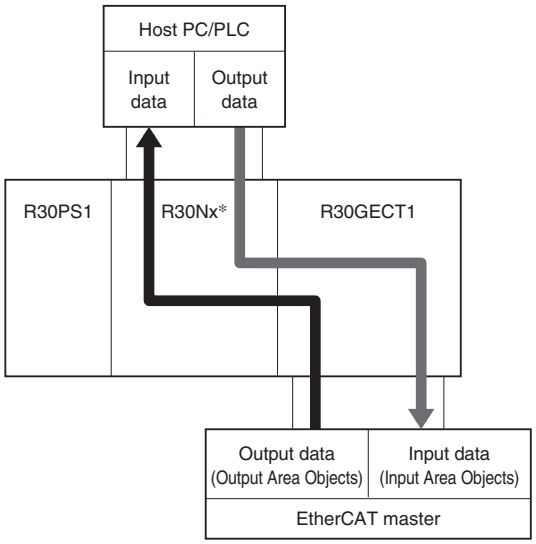
■ **BOTTOM VIEW**



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 Newtork module

■ FLOW OF OUTPUT DATA

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

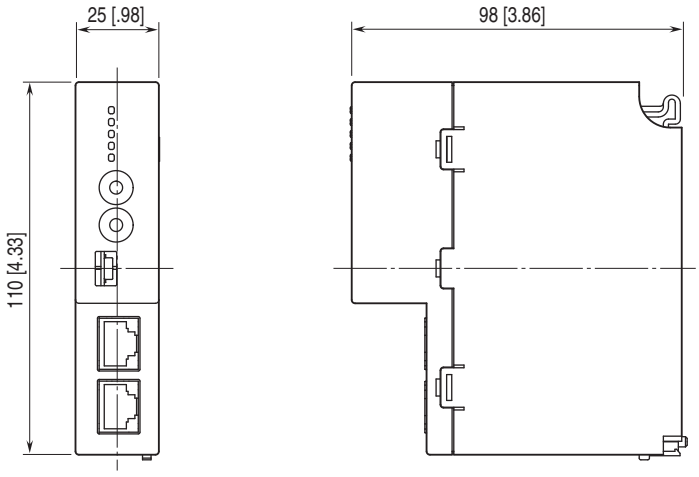
Output data (Output Area Objects) from EtherCAT master is transmitted as Input data to Host PC/PLC.

■ FLOW OF INPUT DATA

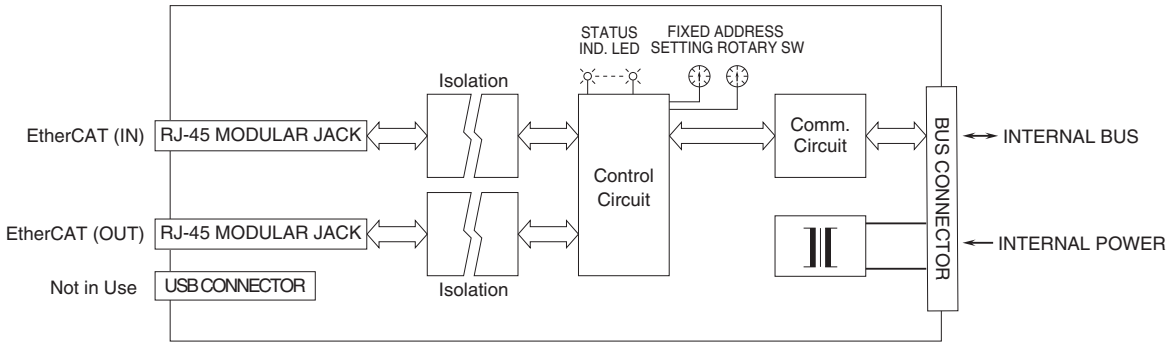
[Host PC/PLC]—>[R30 Network module]—>[R30 internal bus]
—>[R30GECT1]—>[EtherCAT master]

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

EXTERNAL DIMENSIONS unit: mm [inch]

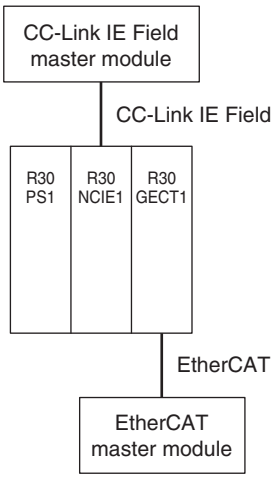


SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



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.