

## Remote I/O R30 Series

### CC-Link INTERFACE MODULE

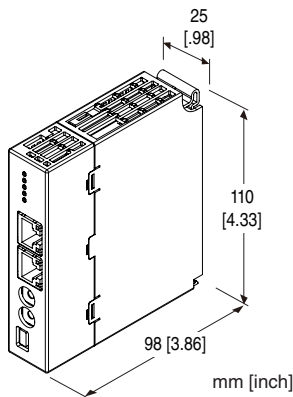
(CC-Link IE Field network)

#### Functions & Features

- Serves as a gateway for allowing CC-Link IE Field Network 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 CC-Link IE Field Network in the same manner as R30NCIE1.

#### Typical Applications

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



## MODEL: R30GCIE1S[1]

### ORDERING INFORMATION

- Code number: R30GCIE1S[1]
- Specify a code from below for [1].  
(e.g. R30GCIE1S/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)  
Downloadable at our web site.
- For connecting to PC, use commercially available Mini-B type USB cable. (provided by user)

### GENERAL SPECIFICATIONS

#### Connection

**CC-Link IE Field:** RJ-45 connector

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

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

**Isolation:** CC-Link IE Field to internal bus or internal power

**Internal bus communication cycle:** Approx. 1 msec.

**Status indicator:** RUN, RD, SD, D LINK, ERR, L ER, LINK  
(Refer to the instruction manual.)

### CC-Link IE Field COMMUNICATION

**Protocol:** IEEE 802.3

**Transmission type:** 1000BASE-T

**Communication speed:** 1 Gbps

**Network cable:** Cable conformed to CC-Link IE Field  
Double shielded twist pair cable (CAT5e)

RJ-45 connector

**Network topology:** Line, star and ring

**Max. number of stations:** 120 (Total slave stations)  
(Number of max. connectable slaves may vary depending on the master module. Refer to the instruction manual of the master module)

**Max. station-to-station distance:** 100 m

**Station type:** Remote device station

**Link device:** RX/RX 128 points, RWw/RWr 64 points

**NetWork No.:** 1 to 239 (factory default: 1)

### INSTALLATION

**Current consumption:** 140 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:** 125 g (0.28 lb)

## PERFORMANCE

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

**Dielectric strength:** 1500 V AC @ 1 minute (CC-Link IE Field 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

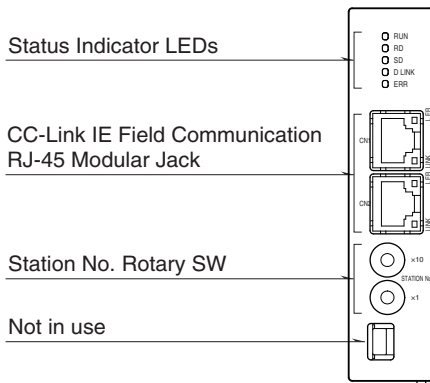
EMI EN 61000-6-4

EMS EN 61000-6-2

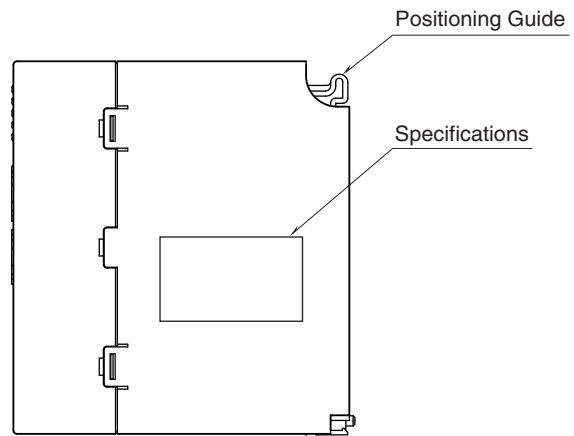
RoHS Directive

## EXTERNAL VIEW

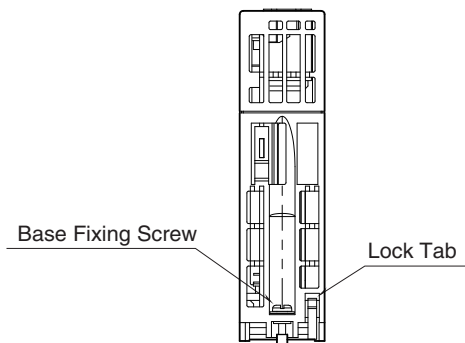
### FRONT VIEW



### SIDE VIEW



### BOTTOM VIEW



## TRANSMISSION DATA DESCRIPTIONS

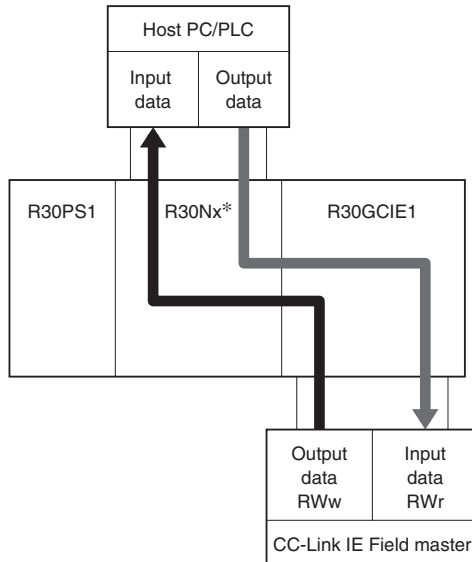
Number of transmission data: 4 points (4 words) for input; 4 points (4 words) for output

This unit is equivalent to an analog I/O mixed module (AIO4) of R30 series, and is recognized as an I/O module by Interface module (e.g. model: R30NECT1).

Station type: Remote device station

Link device: RX/RX 128 points, RWw/RWr 64 points

### • DATA FLOW



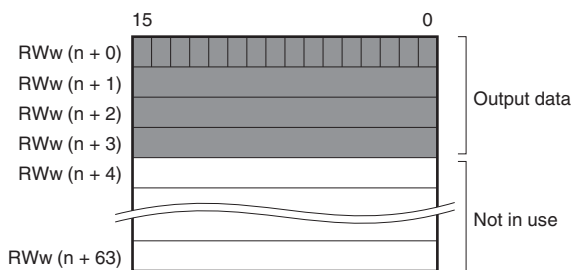
\* R30Nx: R30 Interface module

### ■ OUTPUT DATA

The figure below shows details of data transmitted to Host PC/PLC from Interface module.

[CC-Link IE Field master] → [R30GCIE1] → [R30 internal bus] → [R30 interface module] → [Host PC/PLC]

Output data (RWw) from CC-Link IE Field master is transmitted as Input data to Host PC/PLC.



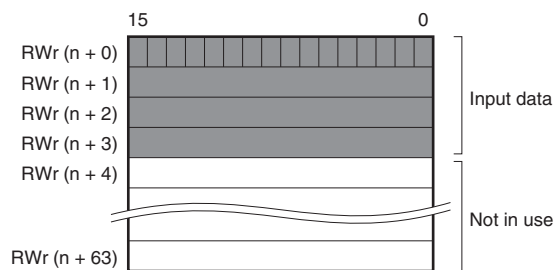
n: initial device

### ■ INPUT DATA

The figure below shows details of data received by Interface module from Host PC/PLC.

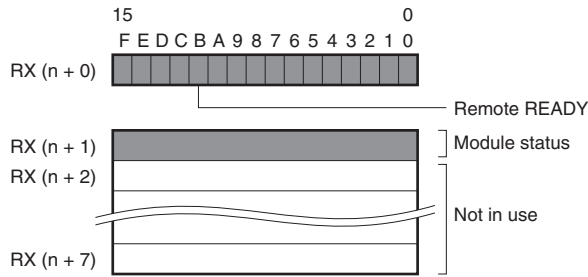
[Host PC/PLC] → [R30 interface module] → [R30 internal bus] → [R30GCIE1] → [CC-Link IE Field master]

Output data from Host PC/PLC is transmitted as Input data (RWr) to CC-Link IE Field master.



n: initial device

## ■ STATUS



n: initial device

- RX(n+0)0 to 7 is reservation area, RX(n+0)B is used as Ready signal, and the bit is "1" when this module is operating normally. RX(n+0)8 to A and RX(n+0)C to F are not in use.

### • Module Status

RX(n + 1)0 indicates communication status of this unit.

1 = Normal communication

0 = Communication error / timeout

RX(n + 1)1 indicates internal communication status.

1 = Normal communication

0 = Communication stop / communication error

RX(n + 1)2 indicates communication status of field bus built in the interface module.

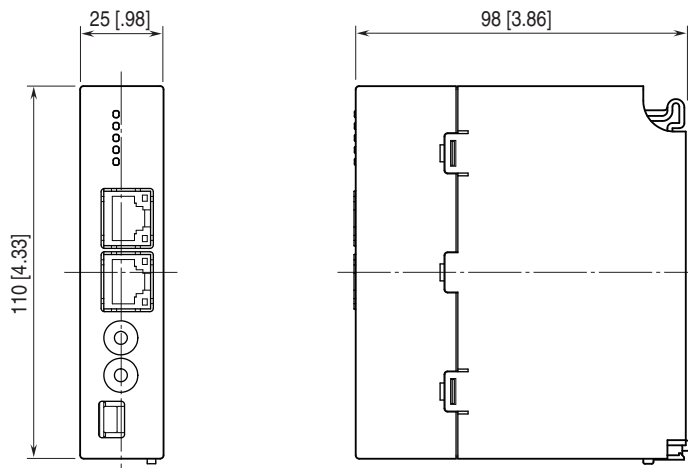
1 = Normal communication

0 = Communication stop / communication error / timeout

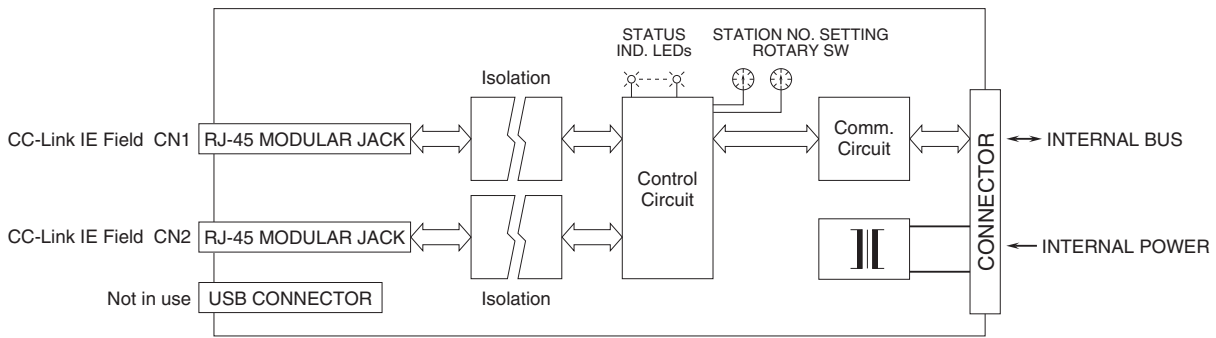
RX(n + 1)3 to F are not in use.

Link devices other than the above are not in use.

## EXTERNAL DIMENSIONS unit: mm [inch]



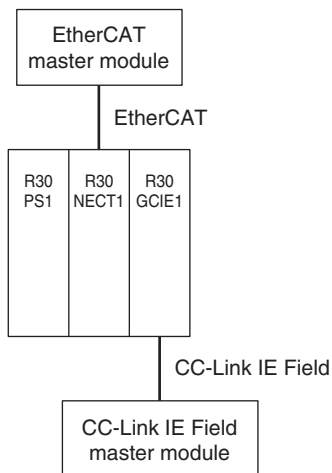
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



CN1 and CN2 of RJ-45 modular jacks for CC-Link IE Field network can be connected in any order.

## SYSTEM CONFIGURATION EXAMPLES

The below figure shows a system configuration example in which CC-Link IE Field data is converted into EtherCAT data by using this unit as a gateway.



Specifications are subject to change without notice.