

## Remote I/O R30 Series

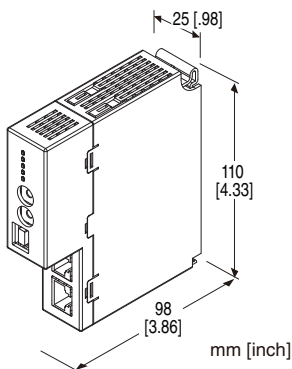
### NETWORK MODULE

(EtherCAT)

#### Functions & Features

- Interchanges analog or discrete I/O signals with the fieldbus (EtherCAT)
- Combined with R3 Series I/O modules

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



## MODEL: R30NECT1[1]

### ORDERING INFORMATION

- Code number: R30NECT1[1]
- Specify a code from below for [1].  
(e.g. R30NECT1/Q)
- Specify the specification for option code /Q  
(e.g. /C01)

### [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

- R3 series I/O modules can be added by using an installation base for R3 I/O module extension (model: R30EBS). Note that the firmware version must be 1.04.x or later.

- When using the extension base, be sure to install at least one R30 I/O module on the R30BS, otherwise communication error occurs.

- The internal bus communication period for R3 series I/O modules installed on the R30EBS is as follows.

Internal bus communication period = 6 msec. × number of I/O module + 10 msec. (Data update period of main CPU)

Example: Four R3 I/O modules

$$6 \text{ msec.} \times 4 + 10 \text{ msec.} = 34 \text{ msec.}$$

Even when the R30EBS is mounted to the R30BS, the internal bus communication period of R30 series is kept to approx. 1 msec.

### RELATED PRODUCTS

- PC configurator software (model: R30CFG)
- PC configurator software (model: R3CON)
- ESI file

The ESI file and configurator software are downloadable at M-System's web site.

For connecting to PC, use commercially available Mini-B type USB cable. (provided by user)

- R3 series I/O modules (except R3-TC2)

### 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:** 110 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

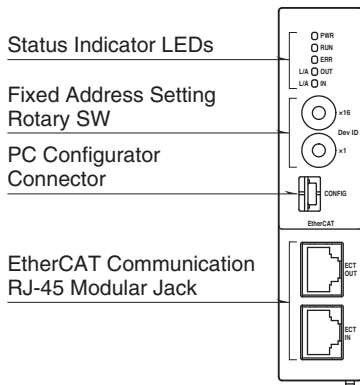
**Insulation resistance:**  $\geq 100 \text{ M}\Omega$  with 500 V DC  
**Dielectric strength:** 1500 V AC @ 1 minute (EtherCAT to internal bus or internal power)  
 1500 V AC @ 1 minute (power input to FE; isolated on the power supply module)

## STANDARDS & APPROVALS

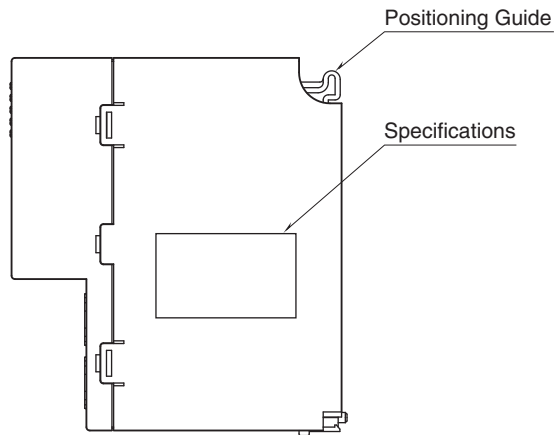
**EU conformity:**  
 EMC Directive  
 EMI EN 61000-6-4  
 EMS EN 61000-6-2  
 RoHS Directive

## EXTERNAL VIEW

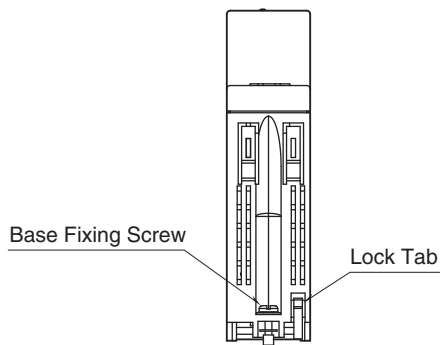
### FRONT VIEW



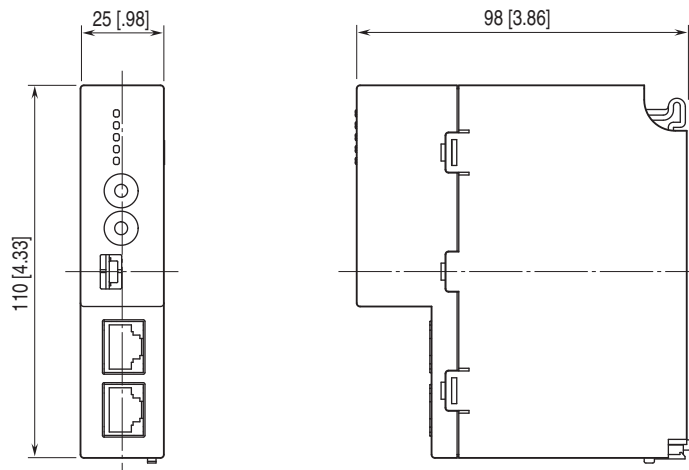
### SIDE VIEW



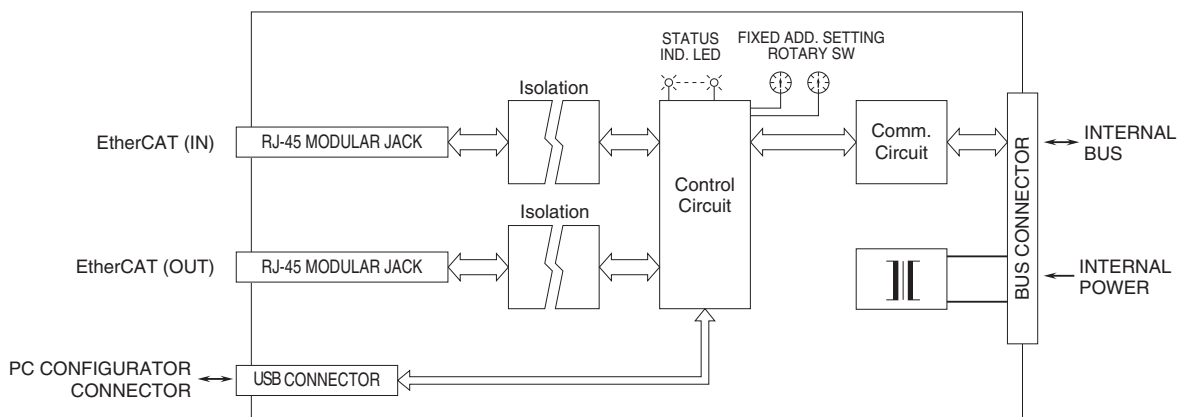
### BOTTOM VIEW



## EXTERNAL DIMENSIONS unit: mm [inch]



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.