Remote I/O R30 Series

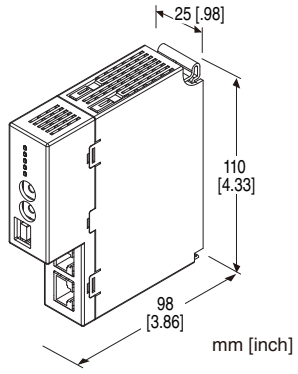
NETWORK MODULE

(EtherCAT)

Functions & Features

• Interchanges analog or discrete I/O signals with the filedbus (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 msec. × 4 + 10 msec. = 34 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

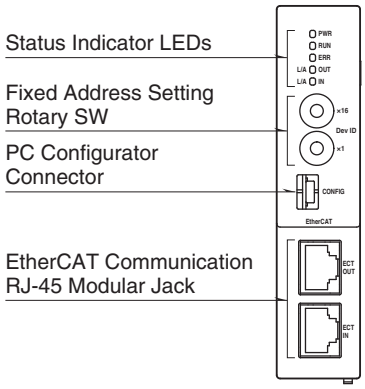
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute (EtherCAT to internal bus or internal power)
1500 V AC @ 1 minute (power input to FE; isolated on the power supply module)

STANDARDS & APPROVALS

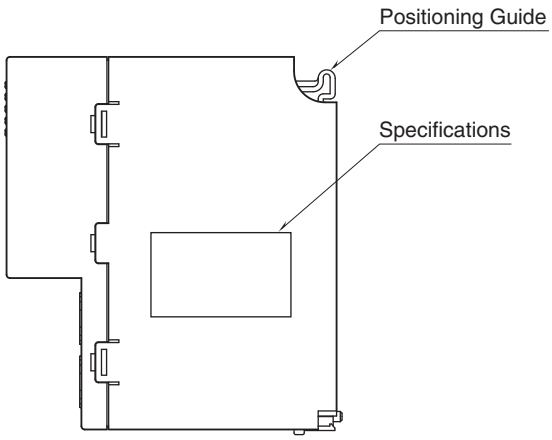
EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

EXTERNAL VIEW

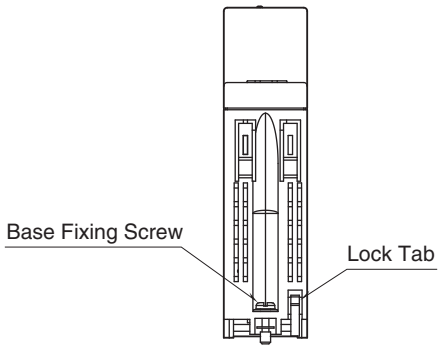
■ **FRONT VIEW**



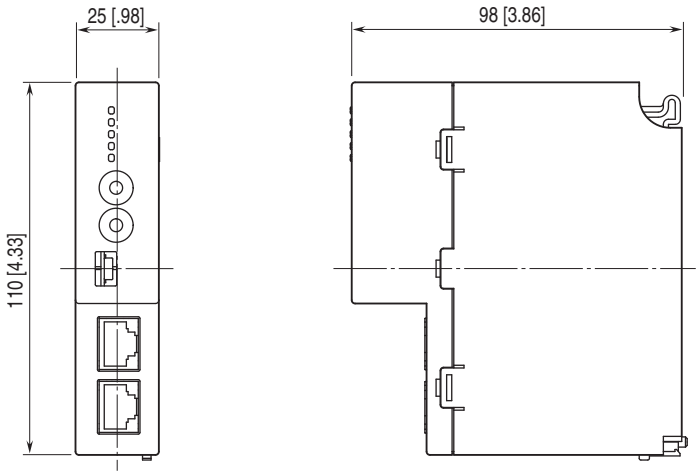
■ **SIDE VIEW**



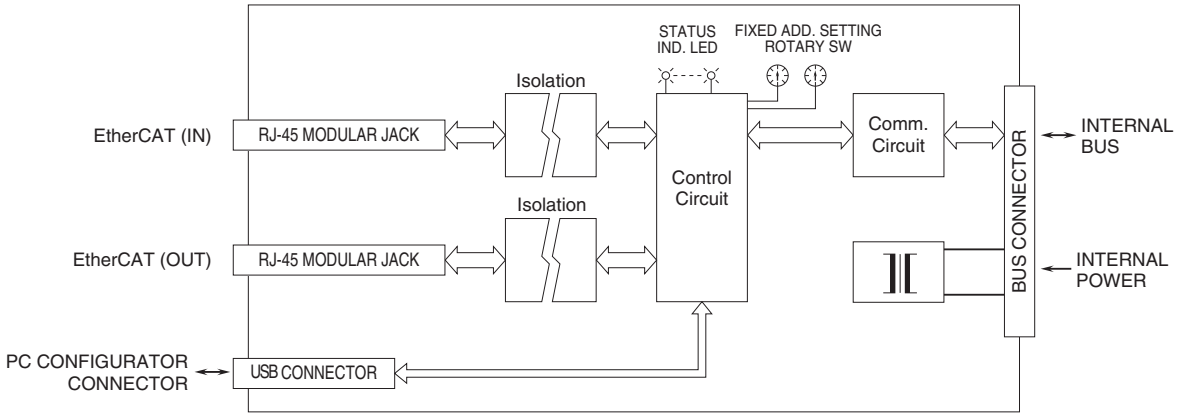
■ **BOTTOM VIEW**



EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



⚠ Specifications are subject to change without notice.