

MODEL

# MR-J3-T10

March 2011

**New Product Release**

SV1103-1E

## Innovate Your Driving Control System with CC-Link IE Field Network.



MR-J3-T10 enables an MR-J3-T servo amplifier to connect to the Ethernet-based open CC-Link IE Field Network with high speeds up to 1 Gbps.

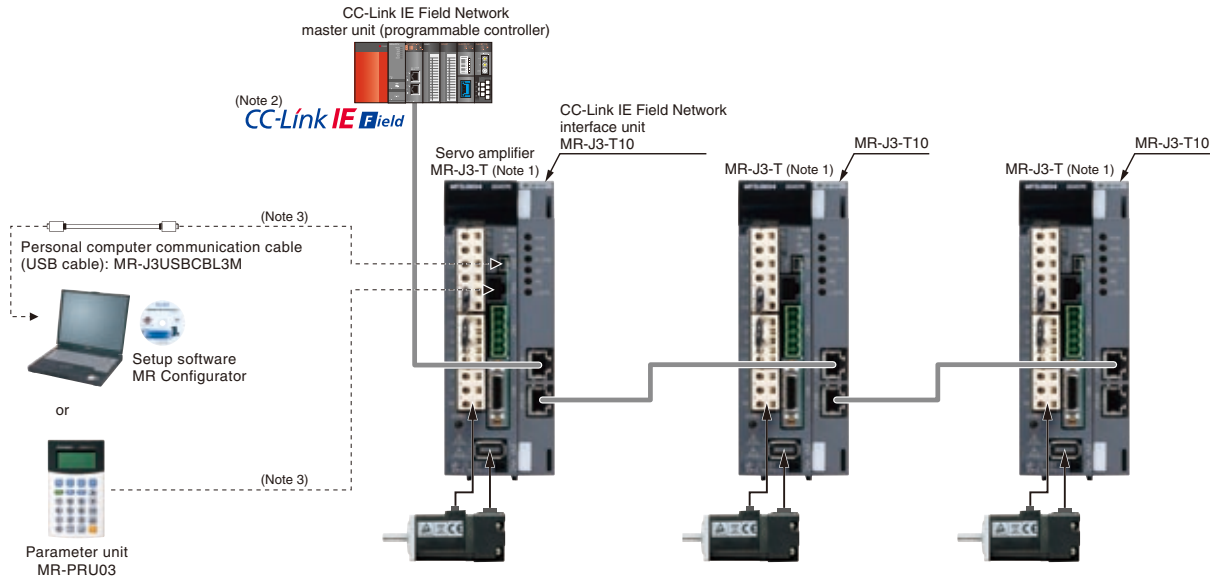
### CC-Link IE Field Network for Driving Control Systems!

- Connect MR-J3-T servo amplifiers to the Ethernet based CC-Link IE Field Network by simply attaching MR-J3-T10 to the servo amplifier.
- Set position and speed data for MR-J3-T servo amplifiers with build-in positioning function via CC-Link IE Field Network.
- Shorten tact time with CC-Link IE Field Network communication speeds up to 1 Gbps.
- Ethernet based network gives a wide variety of options for connectors and cables available on the open market regardless of geographical location.

### CC-Link IE Field

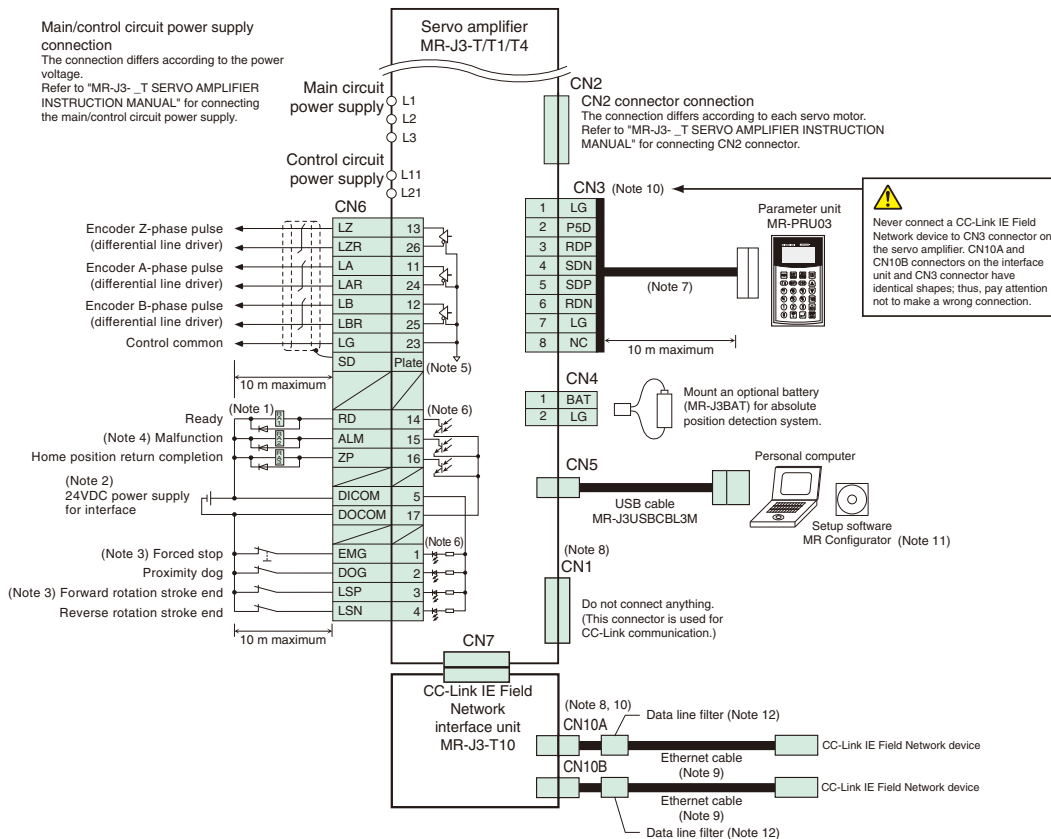
This new industrial Ethernet field network enables intelligent manufacturing systems to perform high speed I/O control and distributed control simultaneously. Wiring is done easily thanks to standard Ethernet cables and flexible topology.

# System Configurations



- Notes:
1. CC-Link IE Field Network function is supported by servo amplifier with software version B0 or later.
  2. CC-Link interface (CN1 connector on the servo amplifier) and CC-Link IE Field Network interface (CN10A and CN10B connectors on the interface unit) are mutually exclusive. They cannot be used at the same time.
  3. USB interface (CN5 connector) and RS-422 interface (CN3 connector) are mutually exclusive. They cannot be used at the same time.

# Standard Wiring Diagram



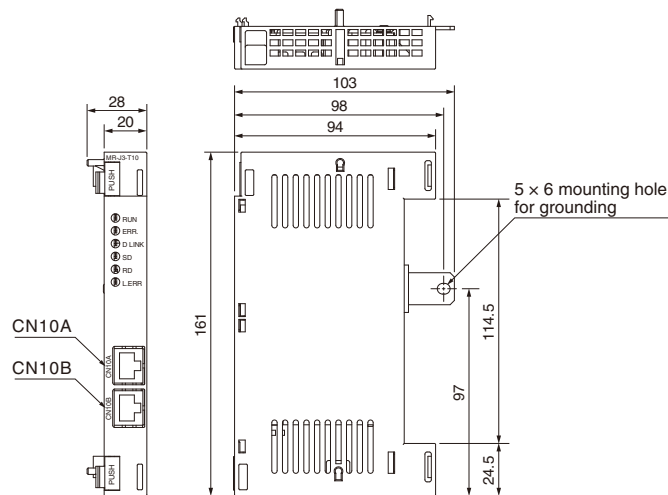
- Notes:
1. Do not reverse the diode's direction. Connecting it backwards may cause the servo amplifier to malfunction such that the signals are not output, and the forced stop and other safety circuits are inoperable.
  2. Use the power supply 24 V DC  $\pm$  10% (required current capacity: 0.15 A). 0.15 A is the value when all of the input/output points are used. The current capacity can be stepped down according to the number of input/output points in use. Refer to "MR-J3- \_T SERVO AMPLIFIER INSTRUCTION MANUAL" for details.
  3. Before operating the servo amplifier, connect EMG (Forced stop), LSP (Forward rotation stroke end) and LSN (Reverse rotation stroke end), which have normally closed contacts, to DOCOM; or set [Pr. PD01] to automatically turn on the forced stop signal.
  4. ALM (Malfunction: normally closed contact) is conducted to DOCOM in normal alarm-free condition.
  5. Connect the shield wire securely to the plate inside the connector (ground plate).
  6. This is for sink wiring. Source wiring is also possible. Refer to "MR-J3- \_T SERVO AMPLIFIER INSTRUCTION MANUAL" for details.
  7. Use a commercial LAN cable (EIA568 compliant). A personal computer can be connected using a RS-422/RS-232C conversion cable. Note that USB interface (CN5 connector) and RS-422 interface (CN3 connector) are mutually exclusive. They cannot be used at the same time.
  8. CC-Link interface (CN1 connector on the servo amplifier) and CC-Link IE Field Network interface (CN10A and CN10B connectors on the interface unit) are mutually exclusive. They cannot be used at the same time. CN1 connector is used only when operated with CC-Link communication.
  9. Refer to "Ethernet Cable Specifications" in this brochure.
  10. Never connect a CC-Link IE Field Network device to CN3 connector on the servo amplifier. CN10A and CN10B connectors on the interface unit and CN3 connector have identical shapes; thus, pay attention not to make a wrong connection.
  11. The CC-Link IE Field Network function of MR-J3-T servo amplifier is supported by MRZJW3-SETUP221E with software version C4 or later.
  12. Attach a data line filter (standard accessory) close to CN10A and CN10B connectors.



## MR-J3-T10 CC-Link IE Field Network Interface Unit Specifications

Item		Description
Model		MR-J3-T10
Control circuit power supply	Voltage	5 V DC (Control circuit power for the CC-Link IE Field Network interface unit is supplied from the servo amplifier.)
	Rated current [A]	0.8
Input/output interface		CC-Link IE Field Network
Number of communication ports		2 ports (CN10A and CN10B connectors)
Structure (IP rating)		Natural cooling, open (IP00)
Environment	Ambient temperature	0 °C to 55 °C (32 °F to 131 °F) (non-freezing), storage: -20 °C to 65 °C (-4 °F to 149 °F) (non-freezing)
	Ambient humidity	90% RH maximum (non-condensing), storage: 90% RH maximum (non-condensing)
	Ambience	Indoors (no direct sunlight); no corrosive gas, inflammable gas, oil mist and dust
	Altitude	1000 m or less above sea level
Vibration		5.9 m/s <sup>2</sup> less at 10 Hz to 55 Hz (directions of X, Y and Z axes)
Mass [g (lb)]		150 (0.33)

## MR-J3-T10 CC-Link IE Field Network Interface Unit Dimensions

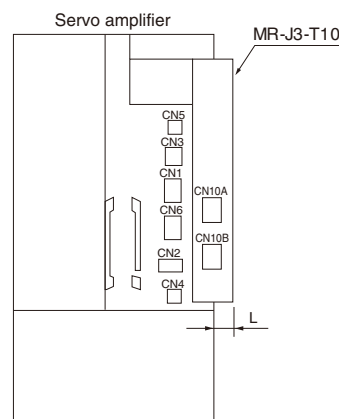
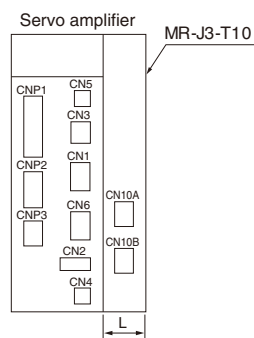


[Unit: mm]

## Dimensions when MR-J3-T10 is installed

- 100 V/200 V, 0.1 kW to 3.5 kW
- 400 V, 0.6 kW to 2 kW

- 200 V, 5 kW and 7 kW
- 400 V, 3.5 kW to 7 kW



Model	Variable dimensions
	L
MR-J3-10T(1) to 100T(4)	20
MR-J3-200TN, 200T4, 350T	15
MR-J3-350T4, 500T(4), 700T(4)	10

Note: For 11 kW to 22 kW servo amplifier (200 V/400 V), MR-J3-T10 will be built into the servo amplifier.

[Unit: mm]

## Ethernet Cable Specifications (Note 1, 2, 3)

Item	Description
Cable type	Shielded twisted pair cable (category 5e)
Standard	The cable must meet either of the following standards: <ul style="list-style-type: none"><li>• IEEE802.3 1000BASE-T</li><li>• ANSI/TIA/EIA-568-B (category 5e)</li></ul>
Connector	Category 5e or above, RJ-45 plug

- Notes: 1. Use wiring parts recommended by CC-Link Partner Association for wiring the CC-Link IE Field Network.  
2. CC-Link IE Controller Network cable cannot be used for the CC-Link IE Field Network.  
3. CC-Link IE Field Network cables are available at the FA PRODUCT DIVISION of Mitsubishi Electric System & Service Co., Ltd. Please contact them by email: oss-ip@melsec.jp  
Model: SC-E5EW-S\_M(-L) ( \_ = cable length)



### Safety Warning

To ensure proper use of the products listed in this catalog, please be sure to read the instruction manual prior to use.

**MITSUBISHI ELECTRIC CORPORATION**

HEAD OFFICE : TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN