



for a greener tomorrow

MITSUBISHI ELECTRIC SERVO SYSTEM  
**MELSERVO-J5**

## Product Overview



**Innovation**  
For evolution of machines



**Connectivity**  
For flexible system configurations



**Maintainability**  
For prompt detection and diagnosis of failures



**Usability**  
For quick operation start

# MR-J5 SERIES SERVO AMPLIFIERS



The MELSERVO-J5 Series offers cutting edge technology, industry leading performance, and advanced servo features allowing users in a variety of industries to unlock unused potential. Connect to iQ-R CC-Link IE TSN motion modules to configure a high-speed and high-precision system, enabling the user breakthrough innovation with predictive maintenance, rapid machine tuning, short settling time, high encoder resolution etc.

## KEY BENEFITS



### Innovation

For evolution of machines

- **Scalable synchronous axes** – Meet any axis requirements, from single axis to a 256 multi-axis system, for various industry applications. All motion modules are programmed in one software environment.
- **Multi-axis within one servo unit** – With up to three axes in one servo unit, this helps to reduce energy consumption and maximizes cabinet space with less wiring.



### Connectivity

For flexible system configurations

- **1 Gbps CC-Link IE TSN based motion** – CC-Link IE TSN is an Ethernet based open communication network. This 1 Gbps network enables time synchronization across all connected devices and includes servo amplifiers, motion modules, I/Os, PLC etc. CC-Link IE TSN facilitates IoT infrastructure across the manufacturing enterprise.
- **Multi network connectivity** – MR-J5 is compatible with EtherCAT®, allowing for a communication cycle of 125µs and pulse train connection at pulse frequency of 4 million pulses/s.



### Usability

For quick operation start

- **Instant start-up tuning** – The servo amplifier sets the speed loop gain and suppresses machine resonance in approximately 0.3 seconds through the servo, on command. The machine is able to run instantly and smoothly once the servo is enabled. The One-Touch Tuning function provides more optimum performance with further gain adjustment to reduce settling time. No tuning experience is required since gain values are automatically generated. This results in a completely trouble-free experience at your machine's startup, and cuts machine setup time and effort.
- **Advanced Vibration Suppression Control II™** – This patented function of the Mitsubishi Electric servo system effectively suppress vibration on both the load and the machine base at frequencies as low as 100Hz. This function enhances high-response motion and improves productivity in a multi-inertia mechanism.



### Maintainability

For prompt detection and diagnosis of failures

- **Servo-based predictive maintenance** – The MR-J5 servo provides predictive maintenance powered by AI technology. The servo amplifier detects mechanical component deterioration through friction and vibration values changes, and generates a failure warning as a reminder before any severe downtime happens. This helps to improve machine uptime, reduce unexpected failures, and minimize spare parts inventory.
- **Safety Sub-Functions** – MR-J5 servo amplifiers work with RD78 motion modules and our iQ-R safety CPU and support safety communication via CC-Link IE TSN. This allows servo motors to support a wide variety of safety sub-functions at a higher safety level, decreasing downtime and improving overall machine safety.



**mitsubishi**  
**MITSUBISHI ELECTRIC AUTOMATION, INC.**

500 Corporate Woods Parkway, Vernon Hills, IL 60061  
Ph 847.478.2100 • Fx 847.478.2253

[us.MitsubishiElectric.com/fa/en](http://us.MitsubishiElectric.com/fa/en)

October, 2020 • ©2020, Mitsubishi Electric Automation, Inc.  
Specifications subject to change without notice. • All rights reserved