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MITSUBISHI ELECTRIC SERVO SYSTEM

MELSERVO-JET

Product Overview

Accuracy
For precise motion control

Connectivity
For flexible system configurations

Simplicity
For clean and compact designs

Usability
For quick operation and startup

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MELSERVO-JET SERIES SERVO SYSTEM

Mitsubishi Electric's next-generation family MELSERVO-JET (MR-JET) Series servo drive and motor provide advanced control technology and performance while simultaneously allowing customers to save costs.

Compatible with CC-Link IE TSN and EtherCAT® network, MR-JET servo products are ideal for various applications including packaging, converting, printing, machine tool, and more.

KEY BENEFITS

Accuracy
For precise motion control

- **Superior trace control –** Eliminate position deviation during acceleration and deceleration
- **Lost motion compensation –** Mitigate the response delay caused by travel direction
- **Path tracking –** Reduce overshoot and improve path accuracy to eliminate tracking error

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-JET is compatible with EtherCAT, allowing for a communication cycle of 125µs.
- **Rotary and linear motor compatibility –** MR-JET servo amplifier supports both rotary motor and linear motor. Rotary motors (HG-KNS and HG-SNS) has 22 bit encoder resolution and linear motor (LM-H3 and LM-AJ) can run at the speed of up to 6.5m/s.

Usability
For quick operation and startup

- **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 1Hz. This function enhances high-response motion and improves productivity in a multi-inertia mechanism.

Simplicity
For clean and compact designs

- **Compact footprint –** Top and bottom wiring saves space and simplifies wiring routes.
- **Unified unit heights and depth** across all capacity drives.

MELSERVO-JET Series Servo System Product Overview

MR-JET

Servo Amplifier	Power Supply Specifications	Rated Output (kW) (*1)	Interface	Control Mode		
				Position	Velocity	Torque
MR-JET-G	200 VAC	0.1, 0.2, 0.4, 0.75,1.0, 2.0, 3.0	CC-Link IE TSN	●	●	●
MR-JET-G-N1			EtherCAT®			

Note 1: The value listed is the servo amplifier rated output. Refer to "Combinations of Rotary Servo Motors and Servo Amplifiers" in the MR-JET brochure for compatible servo motors.

HG-KNS Series

Servo motors with a 22-bit absolute position encoder
Rated speed: 3000 r/min
Maximum speed: 6000 r/min

HG-SNS Series

Servo motors with a 22-bit absolute position encoder
Rated speed: 2000 r/min
Maximum speed: 3000 r/min

Rotary Motors

Servo Motor		Rated Speed (Maximum Speed) r/min	Rated Output (kW)	With Electro-magnetic Brake (B)	Oil Seal (J)	IP Rating (*1)	Features (*3)
Small Capacity	HG-KNS	3000 (6000)	0.1, 0.2, 0.4, 0.75	●	●	IP65	Low inertia, 22-bit absolute position encoder
Medium Capacity	HG-SNS	2000 (3000/2500) (*2)	0.5, 1.0, 1.5, 2.0, 3.0	●	●	IP67	Medium inertia, 22-bit absolute position encoder

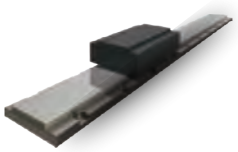
Notes:
1. The shaft-through portion is excluded.
2. The maximum speed of the servo motor of 3.0 kW is 2500 r/min.
3. A battery is required when configuring an absolute position detection system compatible servo motors.

LM-H3 Series

Max. speed: 3 m/s
Rated thrust: 70 N to 720 N
Max. thrust: 175 N to 1800 N
Suitable for space-saving, high speed and high acceleration/deceleration.

LM-AJ Series

Max. speed: 2 to 6.5 m/s
Rated thrust: 68.1 N to 446.8 N
Max. thrust: 214.7 N to 1409.1 N
Low installation height, and suitable for compact X-Y tables.



Linear Servo Motors

Linear Motor	Maximum Speed (m/s)	Continuous Thrust (N)	Maximum Thrust (N)	Features	Application Examples
LM-H3 Series	3.0	70, 120, 240, 360, 480, 720	175, 300, 600, 900, 1200, 1800	Suitable for space-saving. Compact size and high thrust, Maximum speed: 3 m/s	Mounters Wafer cleaning systems FPD assembly machines Material handling
LM-AJ Series	2.0 to 6.5	68.1, 117.0, 136.2, 174.5, 223.4, 234.0, 348.9, 446.8	214.7, 369.0, 429.4, 550.2, 704.5, 738.1, 1100.4, 1409.1	Low installation height, and suitable for compact X-Y tables	Semiconductor manufacturing systems FPD assembly machines

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