



MN-SERVO-MJ3-EC / MN-SERVO-PA4-EC MN-SERVO-YSV-EC/ MN-SERVO-DAA-EC

Distributed Motionnet Single-axis Motion Control Modules
(With e-CON Mini-Clamp Connector)

Features

- Maximum communication speed: 20 Mbps
- Pulse Output Rate: 6.6 MHz (Max.)
- Control up to 64 axes per line
- Multi-axis linear interpolation function
- 2-axis circular interpolation function
- T/S-curve acceleration and deceleration
- Change speed and position on the fly
- Slow down sensor, home sensor, positive and negative limit sensors for each axis
- Software limit and compare trigger output
- Three-way isolation for power, communication and I/O. (Provide better noise immunity and device protection)
- The EC module equipped with Mini-Clamp connector provide for an easier and debris-free wire termination process.



Introduction

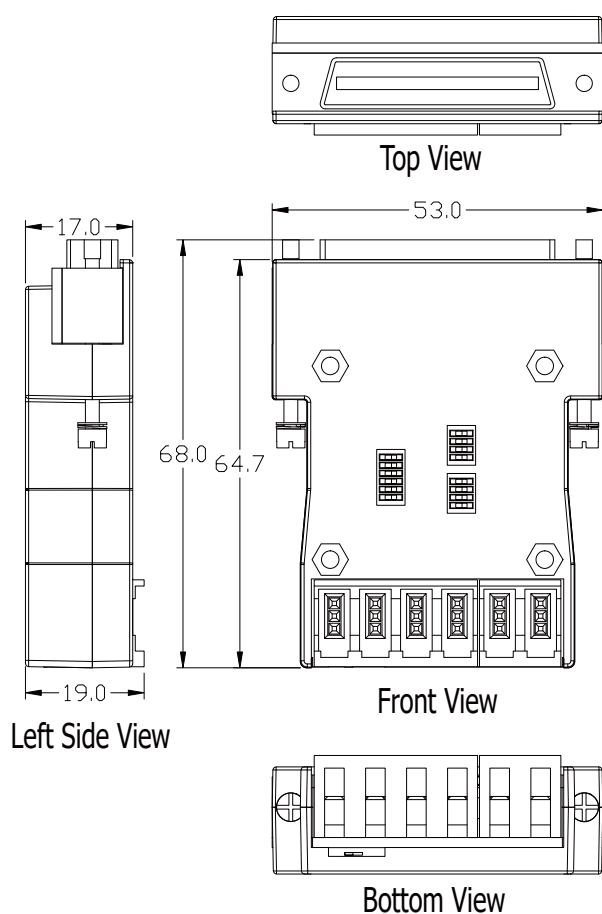
The **MN-SERVO -EC** series is used to expand the number of axes for distributed motion control on a Motionnet field bus. These extension slave modules can be directly connect to the servo driver and are serially connected to the controller using a simple and affordable Cat.5 LAN cable, reducing the amount of wiring required between the drivers and the controller, making this a highly suitable solution for integrated machine automation applications.

After the module is connected to the servo driver, all you need to do is connect a serial LAN cable between the modules. One serial line can support up to 64 single-axis modules. ICP DAS provides a variety of motion control modules suitable for a range of brands of servo drivers, such as Mitsubishi MELSERVO-J3/J4, Yaskawa Sigma II/III/V, Panasonic MINAS A4/A5, Delta ASDA-A/A2 and Teco TSTA-A/A+.

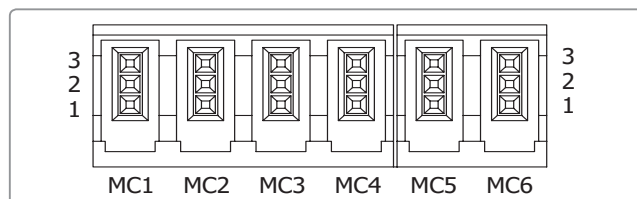
Specifications

Model	MN-SERVO-MJ3-EC	MN-SERVO-PA4-EC	MN-SERVO-YSV-EC	MN-SERVO-DAA-EC
General				
Communication Speed	2.5, 5, 10, 20 Mbps			
Pulse Output Rate	6.6 MHz (Max.)			
Pulse Output Interface	OUT/DIR, CW/CCW			
Pulse Output Counter	28-bit			
Encoder Interface	CW/CCW, A/B phase			
Encoder Counter	28-bit			
Speed Profile	Trapezoidal/S Shaped Acc/Dec Driving			
Home Mode	13 Types			
Mechanical Switch Input	LMT+, LMT-, HOME, SD, EMG			
Servo I/O Interface	Input: ALM, RDY, INP Output: SVON, ERC, ALM_RST			
High-Speed Position Compare Output	5 V TTL or 24 V open collector			
LED Diagnostics	Communication state (Link, Error) Mechanic Switch Input Internal 3.3 V Power Termination Resistor Switch			
Environmental				
Operating Temperature	0 ~ +60 °C			
Storage Temperature	-20 ~ +80 °C			
Operating Humidity	10 ~ 85%; non-condensing			
Storage Humidity	5 ~ 95%; non-condensing			

■ Dimensions: (Units: mm)



■ Pin Assignments



Connector	No.	Name	Description	Signal Direction
MC1	3	Data-	Serial communication data-	Both
	2	Data+	Serial communication data+	Both
	1	F.G.	Frame ground	None
MC2	3	Data-	Serial communication data-	Both
	2	Data+	Serial communication data+	Both
	1	F.G.	Frame ground	None
MC3	3	E24V	External power 24V	Input
	2	EGND	External ground	Input
	1	F.G.	Frame ground	None
MC4	3	E24V	External power 24V	Input
	2	EGND	External ground	Input
	1	F.G.	Frame ground	None
MC5	3	CMP	High-speed position compare	Output
	2	EMG	Emergency stop	Input
	1	SD	Slowdown	Input
MC6	3	LMT+	Positive end limit	Input
	2	HOME	Home position	Input
	1	LMT-	Negative end limit	Input

■ Ordering Information

MN-SERVO-MJ3-EC CR	Distributed Motionnet Single-axis Motion Control Module with e-CON Mini-Clamp connector for Mitsubishi MELSERVO-J3/J4 (RoHS)
MN-SERVO-PA4-EC CR	Distributed Motionnet Single-axis Motion Control Module with e-CON Mini-Clamp connector for Panasonic MINAS A4 (RoHS)
MN-SERVO-YSV-EC CR	Distributed Motionnet Single-axis Motion Control Module with e-CON Mini-Clamp connector for Yaskawa Sigma II/III/V (RoHS)
MN-SERVO-DAA-EC CR	Distributed Motionnet Single-axis Motion Control Module with e-CON Mini-Clamp connector for Delta ASDA-A/A2 (RoHS)

■ Related Products

MN-3254/MN-3253/ MN-3257 CR/MN-3254T MN-3253T/MN-3257T CR	Distributed Motionnet 16-ch Isolated DI and 16-ch Isolated DO / 32-ch Isolated DI / 32-ch Isolated DO Module (RoHS)
PISO-MN200(T/EC) CR	PCI Bus, Dual-line Motionnet Control Master Card (RoHS)

■ Accessories

Mini Clamp Wiremount Plug			Applicable Wire		
ICP DAS Part No.	Cover Color	3M Part No.	AWG No.	Cross-sectional Area (mm ²)	Finished External Diameter Φ (mm)
4PKD1O0000001	Gray	37103-2206-000FL	20 – 22	0.3 – 0.5	1.6 – 2.0
4PKD1O0000002	Red	37103-3101-000FL	24 – 26	0.14 – 0.3	0.8 – 1.0
4PKD1O0000003	Orange	37103-3163-000FL	24 – 26	0.14 – 0.3	1.2 – 1.6

