

# MN-SERVO-MJ3 / PA4 / YSV / DAA / TTA

## Distributed Motionnet Single-axis Motion Control Modules



### Features:

- Maximum communication speed: 20 Mbps
- Maximum pulse output frequency: 6.6Mpps.
- Control up to 64 axes / line
- Multi-axes linear interpolation function
- 2-axes circular interpolation function
- Programmable T/S-curve acceleration and deceleration
- Change speed and position on the fly
- Home sensor, positive and negative limit sensors for each axis
- Software limit and compare trigger output

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Remote Motion Solutions

### Introduction:

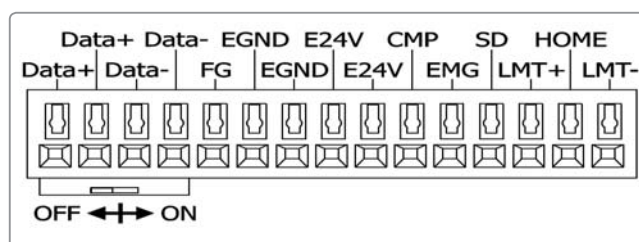
The **MN-SERVO** series is used to expand the number of axes for distributed motion control in Motionnet field bus. These extension slave modules connect serially by a simple and affordable Cat.5 LAN cable, reducing the wiring between driver and controller. This is very suitable for highly integrated machine automation applications.

After the module is plugged into the servo driver, all you need to do is make the serial LAN cable connect between the modules. One serial line can support up to 64 single-axis modules. ICPDAS's Motionnet products provide different motion control modules corresponding to several brands of servo drivers such as Mitsubishi MELSERVO-J3/J4, Yaskawa Sigma II/III/V, Panasonic MINAS A4, Delta ASDA-A/A2 and Tecu TSTA-A/A+.

### Specifications:

|                                    |                                                                                                                  |
|------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Communication Speed                | 2.5 M, 5M, 10M, 20Mbps                                                                                           |
| Maximum Pulse output frequency     | 6.6 Mpps                                                                                                         |
| 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<br>Output: SVON, ERC, ALM_RST                                                               |
| High-Speed Position Compare Output | 5V TTL or 24V open collector                                                                                     |
| LED Diagnostic                     | Communication state (Link, Error)<br>Mechanic Switch Input<br>Internal 3.3V Power<br>Termination Resistor Switch |
| Operating Temp                     | 0 ~ + 60°C                                                                                                       |
| Storage Temp                       | -20 ~ +80°C                                                                                                      |
| Operating Humidity                 | 10 ~ 85%; non-condensing                                                                                         |
| Storage Humidity                   | 5 ~ 95%; non-condensing                                                                                          |

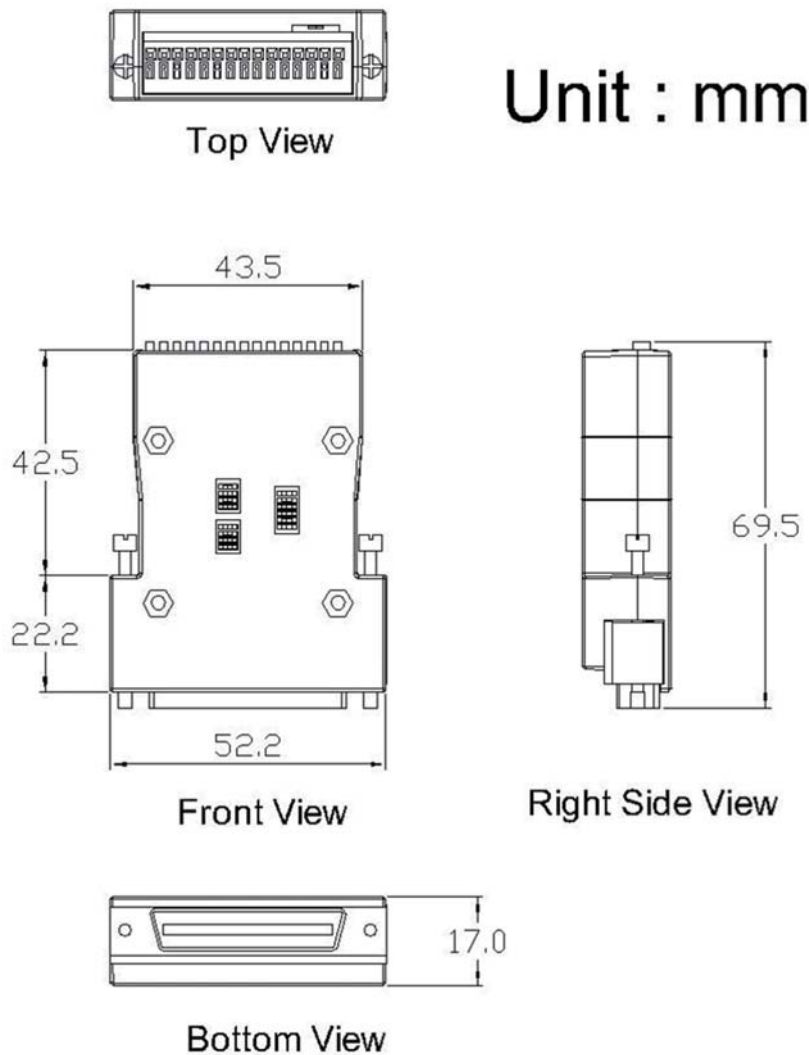
### Pin Assignments:



| No.   | Name  | Information                 | Signal Direction |
|-------|-------|-----------------------------|------------------|
| 1 ~ 2 | Data+ | Serial communication data+  | Both             |
| 3 ~ 4 | Data- | Serial communication data-  | Both             |
| 5     | FG    | Frame ground                | None             |
| 6 ~ 7 | EGND  | External ground             | Input            |
| 8 ~ 9 | E24V  | External power 24V(+)       | Input            |
| 10    | CMP   | High speed position compare | Output           |
| 11    | EMG   | Emergency stop              | Input            |
| 12    | SD    | Slowdown                    | Input            |
| 13    | LMT+  | Positive end limit          | Input            |
| 14    | HOME  | Home position               | Input            |
| 15    | LMT-  | Negative end limit          | Input            |

Wire Range: 28~20 AWG  
Wire Strip Length: 10 mm

## Dimensions: (Unit : mm)



## Ordering Information/Accessories:

| Model No.                   | Product Description                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------|
| <b>MN-SERVO-MJ3</b>         | Distributed Motionnet Single-axis Motion Control Modules for Mitsubishi MELSERVO-J3/J4 |
| <b>MN-SERVO-PA4</b>         | Distributed Single-axis Motion Control Modules for Panasonic MINAS A4                  |
| <b>MN-SERVO-YSV</b>         | Distributed Single-axis Motion Control Modules for Yaskawa Sigma II/III/V              |
| <b>MN-SERVO-DAA</b>         | Distributed Single-axis Motion Control Modules for Delta ASDA-A/A2                     |
| <b>MN-SERVO-TTA</b>         | Distributed Single-axis Motion Control Modules for Teco TSTA-A/A+                      |
| MN-3254 / MN-3253 / MN-3257 | Distributed Motionnet 16 Input & 16 Outputs / 32 Inputs / 32 Outputs Module            |
| PISO-MN200                  | PCI Bus, Dual-Line Motionnet Control Master Card                                       |
| OPP-003F                    | Pink Cord-End Terminal                                                                 |
| OPP-003G                    | Turquoise Cord-End Terminal                                                            |