

MN-3254/MN-3254T

Distributed Motionnet 16-ch Isolated DI, 16-ch Isolated DO Module



Features:

- Maximum communication speed: 20 Mbps
- 16-ch isolated digital inputs, 16-ch isolated digital outputs
- Each Motionnet transfer line: connect modules up to 64
- Designing isolation protection: power, communication, I/O
- LED Diagnostics for communication and I/O status
- Each input port can be specified as NPN or PNP (12~24 V)
- The internal flywheel diode of each output ports can be connect to different sources of power individually.
- High current sinking capability (200 mA)

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Introduction:

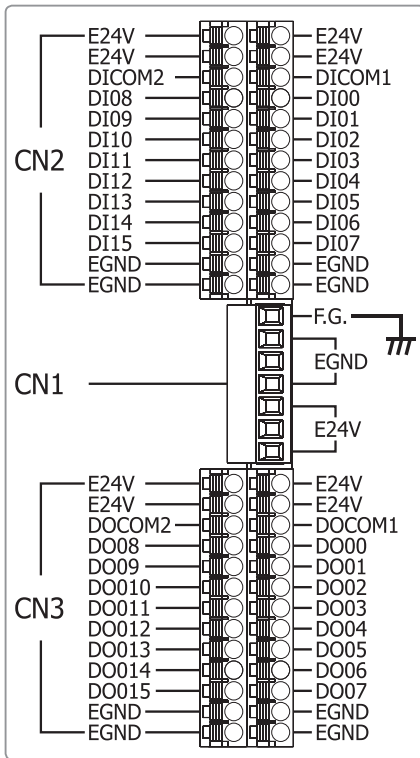
The **MN-3254(T)** is an I/O expansion device for Motionnet systems, and is equipped with **16 isolated digital input channels and 16 isolated digital output channels**. Each Motionnet communication line can be connected to up to 64 modules, meaning that the I/O can be expanded to up to 1024 input channels and 1024 output channels. The communication time required by each MN-325x is 15.1 us. If 64 modules have been connected, signals for 2048 points on 64 modules can be sent and received within 0.97 msec. The update of the I/O status is completed automatically through the Motionnet system at a constant interval, and setting interrupts for specific input points that the customer wants to monitor can help prevent CPU time from being wasted by repetitive polling when there is nothing else for the issuing process to do. Each input port can be specified as either NPN or PNP (12~24 V), and the internal flywheel diodes of each output port can be individually connected to different sources of power (each port is comprise of 8 I/O signals).

Specifications:

| Digital Input | |
|---------------------|---|
| Input Channels | 16 |
| Input Type | Sink/Source (NPN/PNP) |
| On Voltage Level | +10 ~ 30 VDC |
| Off Voltage Level | +3 VDC max. |
| Input Impedance | 4.7 kΩ |
| Isolation Voltage | 3000 Vrms |
| Digital Output | |
| Output Channels | 16 |
| Output Type | Open Collector (Sink), with internal flywheel diode |
| Load Voltage | +30 VDC max. |
| Load Current | 200 mA max. for each channel |
| Isolation Voltage | 3000 Vrms |
| Interface | |
| LED Indicators | Communication state(Link, Error) Input/output state Internal 3.3 V Power Termination resistor switch |
| Communication Speed | Selectable 2.5, 5, 10 or 20 Mbps by DIP Switch. |

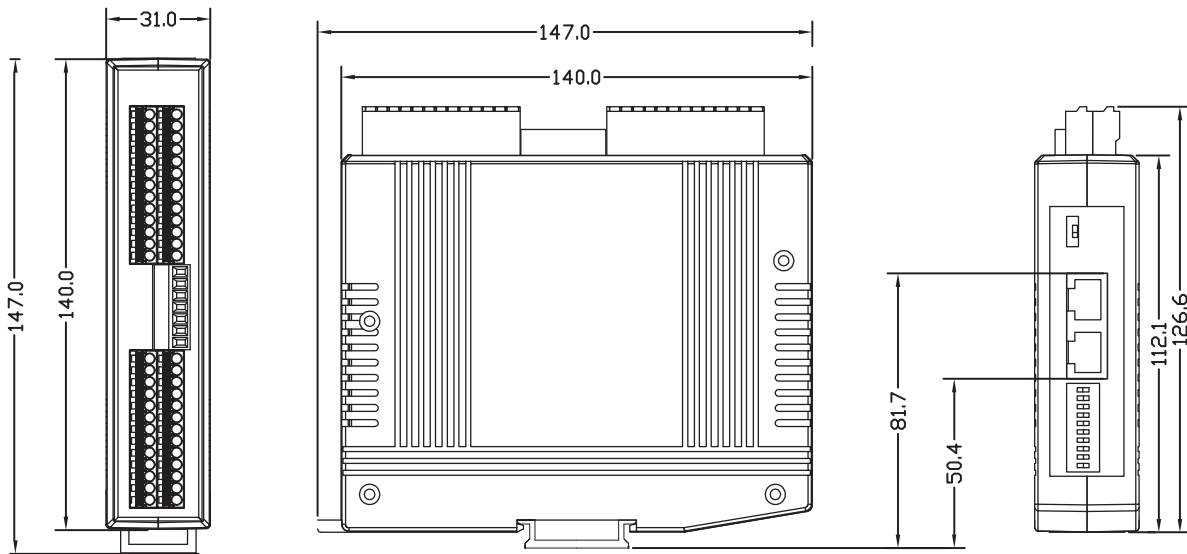
| Cyclic Scan Time | 15.1 μs per device (20 Mbps) |
|-------------------------|--|
| Communication Connector | MN-3254: RJ-45 x 2 MN-3254T: 5-pin terminal block |
| I/O Connector | 13-Pin pluggable Terminal block x 4 |
| Power | |
| Voltage Range | 24 VDC (1000 V isolated) |
| Power Consumption | 2 W max. |
| Protection | Reverse voltage and overcurrent protection |
| Connection | 7-pin removable terminal block |
| Mechanical | |
| Case | Plastic |
| Dimensions (W x H x D) | 31 mm x 140 mm x 126.6 mm |
| Installation | DIN-Rail mounting |
| Environmental | |
| Operating Temperature | 0 ~ + 60°C |
| Storage Temperature | -20 ~ +80°C |
| Operating Humidity | 10 ~ 85%; Non-condensing |
| Storage Humidity | 5 ~ 95%; Non-condensing |

Pin Assignments:



| NO. | Pin Define. | Specifications | I/O Define. |
|-------------------------------------|-------------|---|----------------|
| CN1 Pin Assignments | | | |
| 1 | FG | Frame Ground | - |
| 2 ~ 4 | EGND | External Ground | Input |
| 5 ~ 7 | E24V | External 24V(+) | Input |
| CN2A (Right) Pin Assignments | | | |
| 1 ~ 2 | E24V | External 24V(+) | Connect to CN1 |
| 3 | DICOM1 | Common terminal of DI00~DI07 | Input |
| 4 ~ 11 | DI00~DI07 | Digital input channels 00~07 | Input |
| 12 ~ 13 | EGND | External Ground | Connect to CN1 |
| CN2B (Left) Pin Assignments | | | |
| 1 ~ 2 | E24V | External 24V(+) | Connect to CN1 |
| 3 | DICOM2 | Common terminal of DI08~DI15 | Input |
| 4 ~ 11 | DI08~DI15 | Digital input channels 08~15 | Input |
| 12 ~ 13 | EGND | External Ground | Connect to CN1 |
| CN3A (Right) Pin Assignments | | | |
| 1 ~ 2 | E24V | External 24V(+) | Connect to CN1 |
| 3 | DOCOM1 | Common Anode for Flywheel Diodes of DO00~DO07 | Input |
| 4 ~ 11 | DO00~DO07 | Digital output channels 00~07 | Output |
| 12 ~ 13 | EGND | External Ground | Connect to CN1 |
| CN3B (Left) Pin Assignments | | | |
| 1 ~ 2 | E24V | External 24V(+) | Connect to CN1 |
| 3 | DOCOM2 | Common Anode for Flywheel Diodes of DO08~DO15 | Input |
| 4 ~ 11 | DO08~DO15 | Digital output channels 08~15 | Output |
| 12 ~ 13 | EGND | External Ground | Connect to CN1 |

Dimensions: (Units: mm)



Front View

Right Side View

Top View

Ordering Information/Accessories:

| Model No. | Description |
|--|---|
| MN-3254 CR | Distributed Motionnet 16-ch Isolated DI, 16-ch Isolated DO Module with RJ-45 Connector (RoHS) |
| MN-3254T CR | Distributed Motionnet 16-ch Isolated DI, 16-ch Isolated DO Module with Terminal Block (RoHS) |
| PISO-MN200(T/EC) CR | PCI Bus, Dual-Line Motionnet Master Control Card (RoHS) |
| MN-SERVO Series CR MN-SERVO -EC Series CR | Distributed Motionnet Single-axis Motion Control Modules (with Spring Type Terminal Blocks; EC: with e-CON Mini-Clamp Connector) (RoHS) |
| MN-2091U CR MN-2091U-T CR | Distributed Motionnet Single-axis Universal Motion Control Module (RoHS) |

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