

# 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:

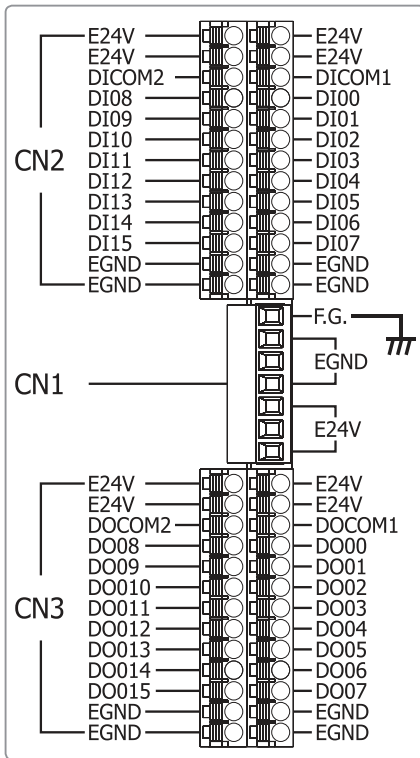
The MN-3254(T) is an I/O expansion device for Motionnet systems, and is equipped with 16 isolated digital input channels and 16 isolated digital output channels. Each Motionnet communication line can be connected to up to 64 modules, meaning that the I/O can be expanded to up to 1024 input channels and 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.

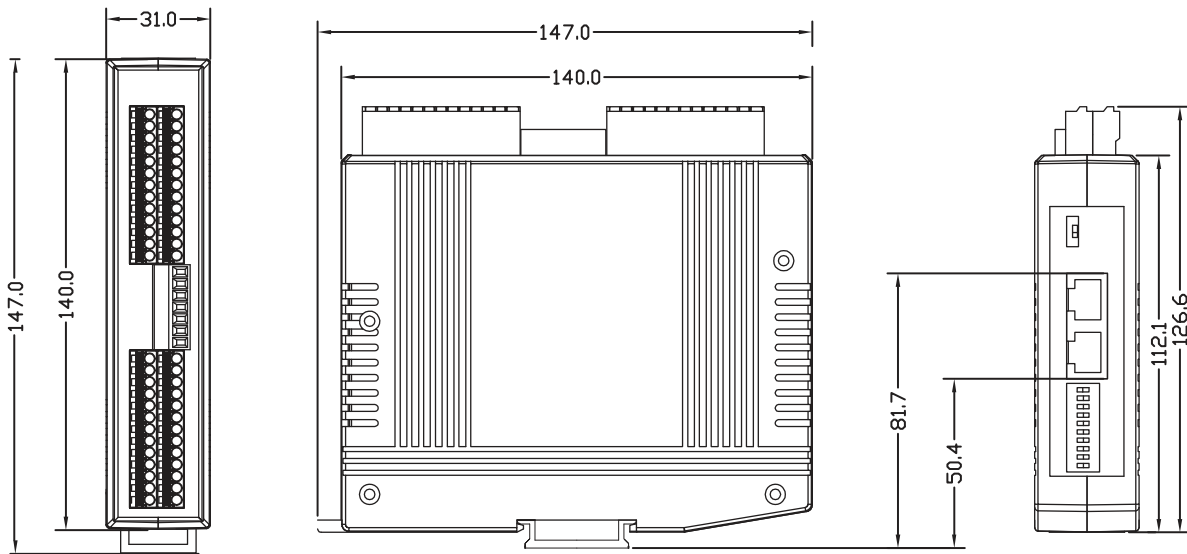
Cyclic Scan Time	15.1 μs per device (20 Mbps)
Communication Connector	MN-3254: RJ-45 x 2 MN-3254T: 5-pin terminal block
I/O Connector	13-Pin pluggable Terminal block x 4
Power	
Voltage Range	24 VDC (1000 V isolated)
Power Consumption	2 W max.
Protection	Reverse voltage and overcurrent protection
Connection	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.
<b>CN1 Pin Assignments</b>			
1	FG	Frame Ground	-
2 ~ 4	EGND	External Ground	Input
5 ~ 7	E24V	External 24V(+)	Input
<b>CN2A (Right) Pin Assignments</b>			
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
<b>CN2B (Left) Pin Assignments</b>			
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
<b>CN3A (Right) Pin Assignments</b>			
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
<b>CN3B (Left) Pin Assignments</b>			
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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