



## MN-D640-DIN

Distributed Motionnet 32-ch Isolated DI Module

### Features

- Maximum communication speed: 20 Mbps
- 32-ch isolated digital inputs
- Each Motionnet transfer Line: connect modules up to 64
- Designing isolation protection: power, communication, I/O
- LED Diagnostics for communication and I/O status



### Introduction

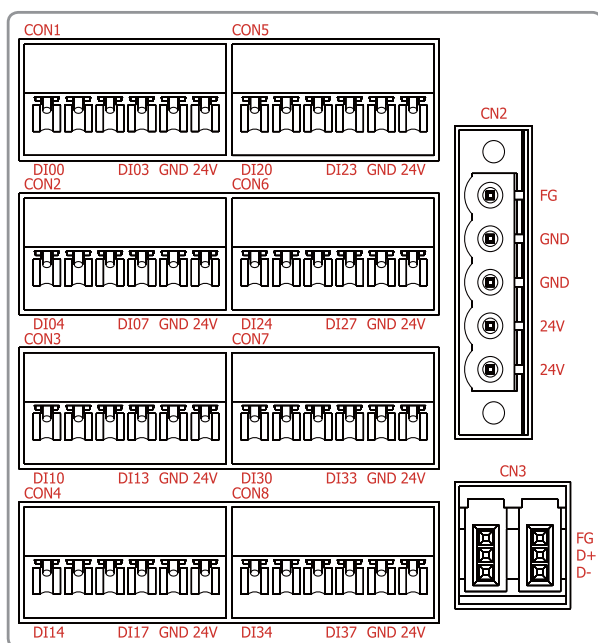
The **MN-D640-DIN** is an I/O expansion device for Motionnet systems, and is equipped with 32 isolated digital input channels. Each Motionnet communication line can be connected to up to 64 modules, meaning that the I/O can be expanded to up to 2048 input channels. The communication time required by each MN-D640-DIN is 15.1  $\mu$ s. 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.

### Specifications

Model	MN-D640-DIN
<b>Digital Input</b>	
Input Channels	32
Input Type	NPN
On Voltage Level	+10 ~ 24 VDC
Off Voltage Level	+3 VDC max.
Input Impedance	4.7K Ohm
Isolation Voltage	2500 Vrms
<b>Interface</b>	
LED Indicators	Communication state (Link, Error) Input/output state Internal 3.3 V Power External 24 V Power
Communication Speed	Selectable 2.5, 5, 10 or 20 Mbps by DIP Switch.
Cyclic Scan Time	15.1 $\mu$ s per device (20 Mbps)
Communication Connector	Mini-clamp Connector x 2
I/O Connector	6-Pin pluggable Terminal block x 8

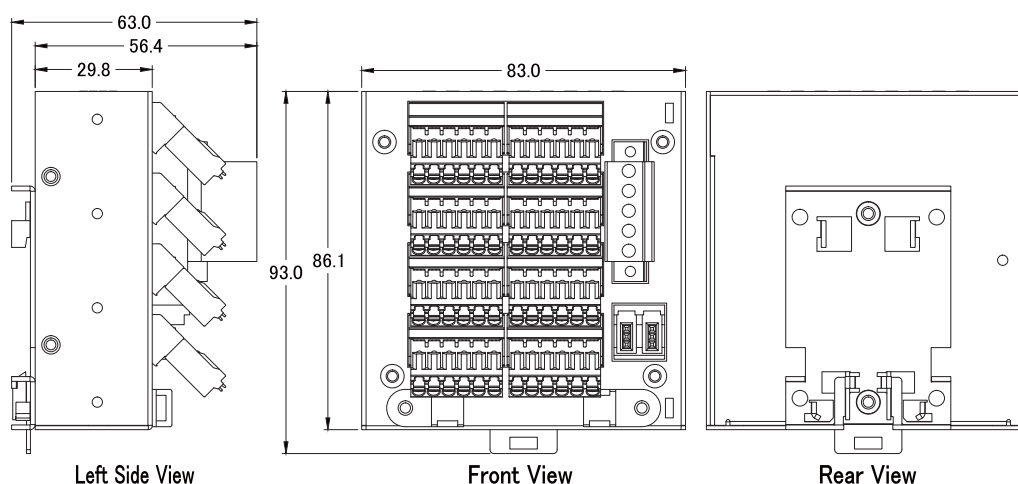
Model	MN-D640-DIN
<b>Power</b>	
Voltage Range	24 VDC (1000 V isolated)
Power Consumption	2 W max.
Protection	Reverse voltage and overcurrent protection
Connection	5-pin removable terminal block
<b>Mechanical</b>	
Case	Aluminum
Dimensions (W x H x D)	83 mm x 93 mm x 63 mm
Installation	DIN-Rail mounting
<b>Environmental</b>	
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>CN3 Pin Assignments</b>			
1	F.G.	Frame Ground	-
2	Data+	Positive terminal of differential communication signal	Bidirectional
3	Data-	Negative terminal of differential communication signal	Bidirectional
<b>CN2 Pin Assignments</b>			
1	F.G.	Frame Ground	-
2~3	GND	External Ground	Input
4~5	24V	External 24V(+)	Input
<b>CON1~8 Pin Assignments</b>			
1~4	DIxx	Digital input channels 00~31	Input
5	GND	External Ground	Connect to CN2
6	24V	External 24V(+)	Connect to CN2

## Dimensions: (Units: mm)



## Ordering Information

<b>MN-D640-DIN CR</b>	Distributed Motionnet 32-ch Isolated DI Module with Mini-clamp Connector (RoHS)
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## Related Products

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)

## Accessories

Mini Clamp Wiremount Plug			Applicable Wire		
ICP DAS Part No.	Cover Color	3M Part No.	AWG No.	Cross-sectional Area (mm <sup>2</sup> )	Finished External Diameter Φ (mm)
4PKD100000001	Gray	37103-2206-000FL	20 – 22	0.3 – 0.5	1.6 – 2.0
4PKD100000002	Red	37103-3101-000FL	24 – 26	0.14 – 0.3	0.8 – 1.0
4PKD100000003	Orange	37103-3163-000FL	24 – 26	0.14 – 0.3	1.2 – 1.6

