

Product Type

107-D140-NXT

32-channel digital input module with upright conformation

Specifications

Size: (L122 x W66 x H114 mm)

Series Interface: Half duplex RS-485 with transformer isolation

Cable Type: CAT5 UTP/STP Ethernet Cable

Surge Protection: 10KV

Transfer Rate: 2.5Mbps, 5Mbps, 10Mbps, 20Mbps

IO Isolation Voltage: 2.5KVrms

Input Impedance: 5.6KΩ/0.5W. Input Current: ±5mA (Max)

Response Time: On to Off about 50μs, Off to On about 8μs

Input Voltage: +24 VDC ±10%

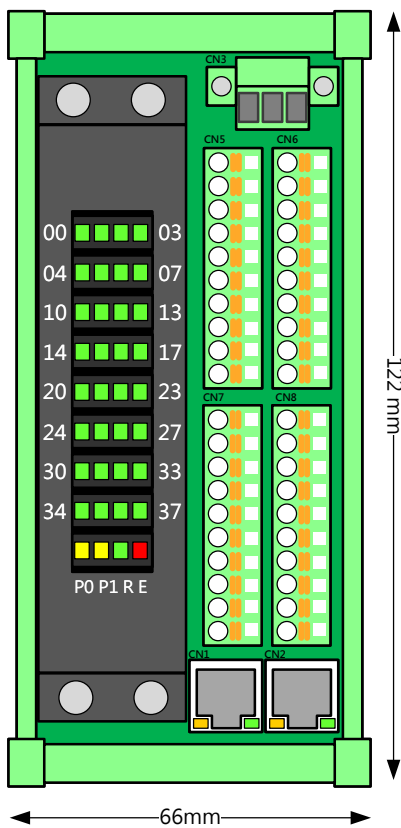
Power Consumption: 3W typical

Working Temperature: 0 ~ 60°C

Ordering Information

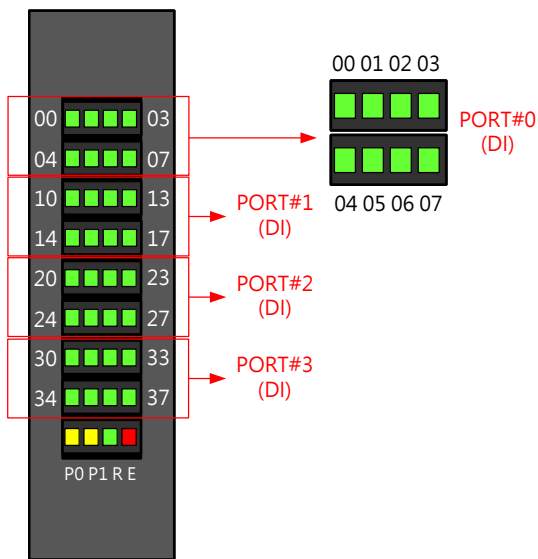
107-D140-NXT – 32-channel digital input with NPN

IO interface

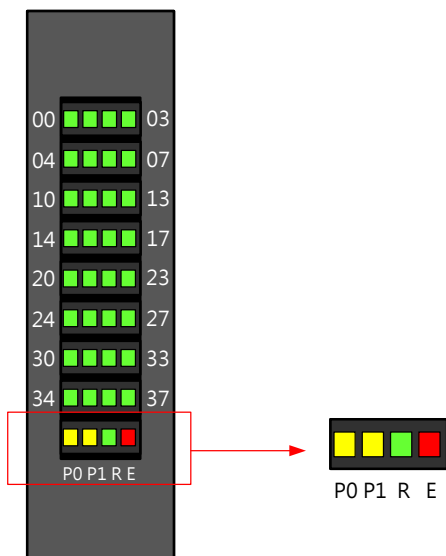


Label	Function
CN1	Motionnet Communication Control Connector
CN2	Motionnet Communication Control Connector
CN3	Power Connector
CN5	I/O Signal Connector
CN6	I/O Signal Connector
CN7	I/O Signal Connector
CN8	I/O Signal Connector

LED Description



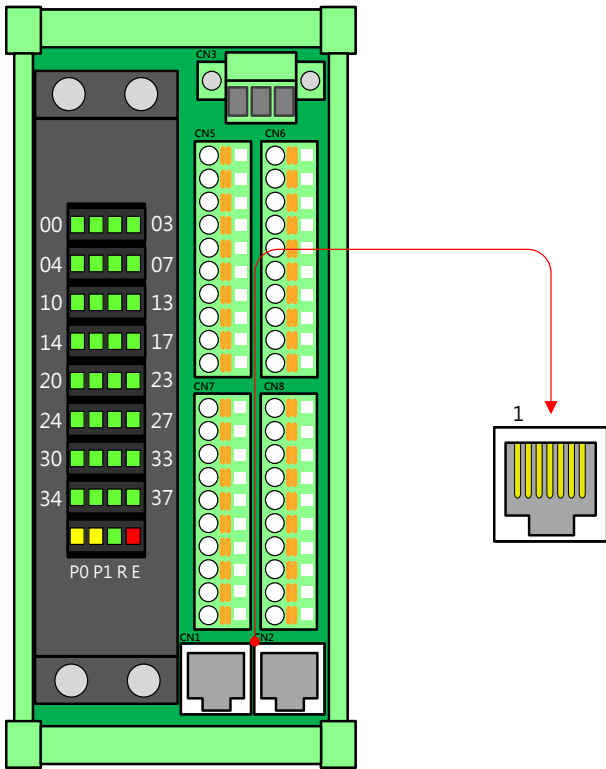
Disp	Label	Disp	Label	Disp	Label
00	Port#0 Bit0	14	Port#1 Bit4	30	Port#3 Bit0
01	Port#0 Bit1	15	Port#1 Bit5	31	Port#3 Bit1
02	Port#0 Bit2	16	Port#1 Bit6	32	Port#3 Bit2
03	Port#0 Bit3	17	Port#1 Bit7	33	Port#3 Bit3
04	Port#0 Bit4	20	Port#2 Bit0	34	Port#3 Bit4
05	Port#0 Bit5	21	Port#2 Bit1	35	Port#3 Bit5
06	Port#0 Bit6	22	Port#2 Bit2	36	Port#3 Bit6
07	Port#0 Bit7	23	Port#2 Bit3	37	Port#3 Bit7
10	Port#1 Bit0	24	Port#2 Bit4	P0	DC 24V
11	Port#1 Bit1	25	Port#2 Bit5	P1	DC 5V
12	Port#1 Bit2	26	Port#2 Bit6	R	RUN
13	Port#1 Bit3	27	Port#2 Bit7	E	ERROR



LED	Description
P0 - Yellow	DC +3.3V In Normal Level
P1 - Yellow	DC +3.3V Supply
R - Green	In Normal Communication
E - Red	Error Communication

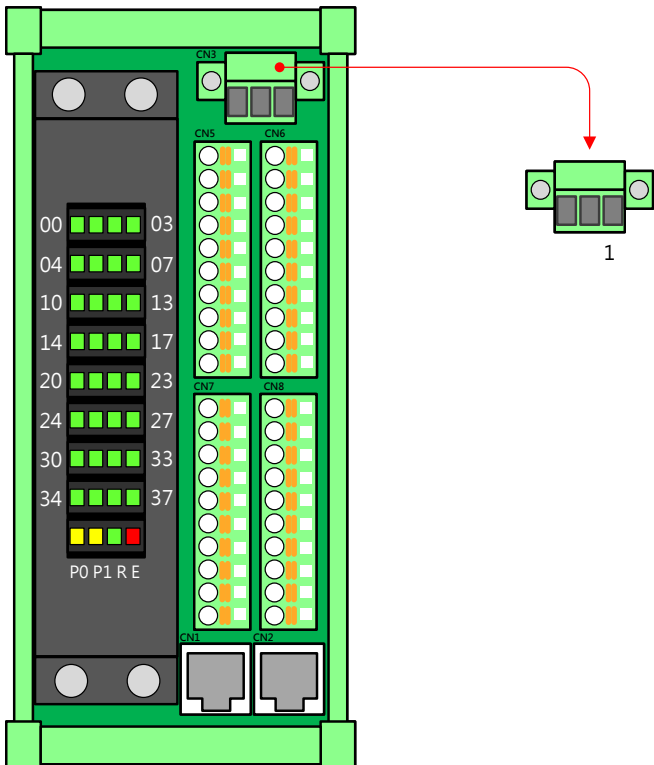
Connector Reference

- Motionnet communication control connector



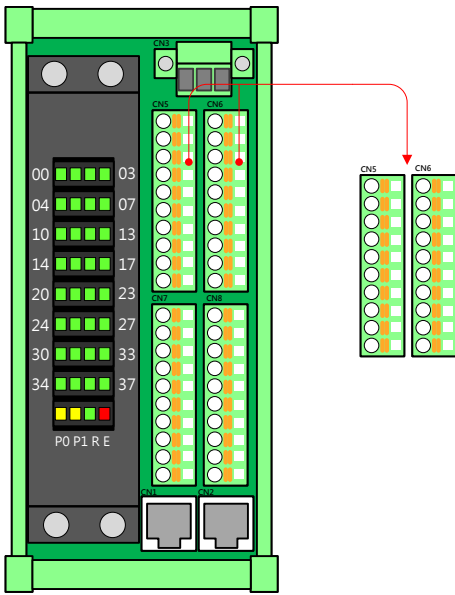
Pin	Label	Function
1	NC	Reserved
2	NC	Reserved
3	D+	Differential D+ signal
4	NC	Reserved
5	NC	Reserved
6	D-	Differential D- signal
7	NC	Reserved
8	NC	Reserved

- Power connector



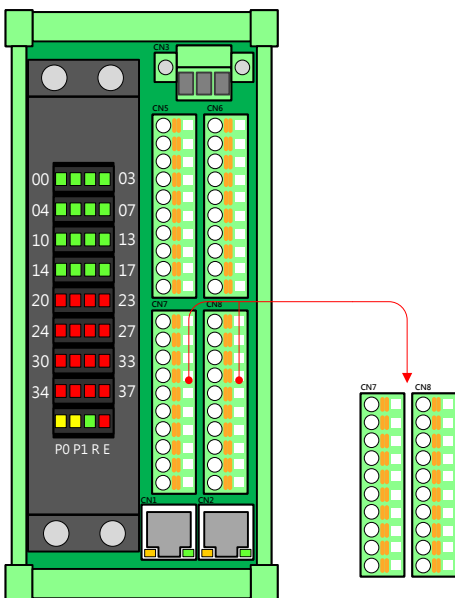
Pin	Label	Function
1	24V	DC 24V
2	GND	DC 24V ground
3	FG	Field ground

● I/O control connector



CN5		
Pin	Label	Function
0	IN_00	Port#0 Bit0 Input
1	IN_01	Port#0 Bit1 Input
2	IN_02	Port#0 Bit2 Input
3	IN_03	Port#0 Bit3 Input
4	IN_04	Port#0 Bit4 Input
5	IN_05	Port#0 Bit5 Input
6	IN_06	Port#0 Bit6 Input
7	IN_07	Port#0 Bit7 Input
8	24V	+24V Power Input
9	GND	24V Ground Input

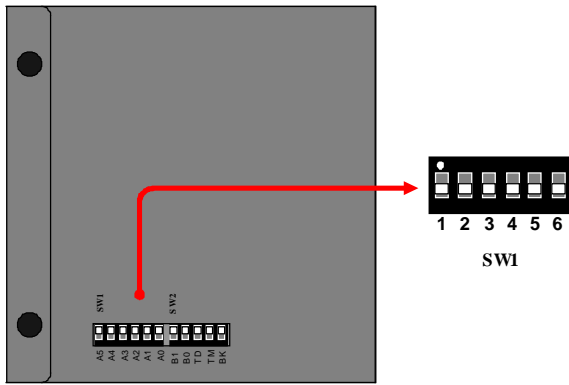
CN6		
Pin	Label	Function
0	IN_10	Port#1 Bit0 Input
1	IN_11	Port#1 Bit1 Input
2	IN_12	Port#1 Bit2 Input
3	IN_13	Port#1 Bit3 Input
4	IN_14	Port#1 Bit4 Input
5	IN_15	Port#1 Bit5 Input
6	IN_16	Port#1 Bit6 Input
7	IN_17	Port#1 Bit7 Input
8	24V	+24V Power Input
9	GND	24V Ground Input



CN7		
Pin	Label	Function
0	IN_20	Port#2 Bit0 Input
1	IN_21	Port#2 Bit1 Input
2	IN_22	Port#2 Bit2 Input
3	IN_23	Port#2 Bit3 Input
4	IN_24	Port#2 Bit4 Input
5	IN_25	Port#2 Bit5 Input
6	IN_26	Port#2 Bit6 Input
7	IN_27	Port#2 Bit7 Input
8	24V	+24V Power Input
9	GND	24V Ground Input

CN8		
Pin	Label	Function
0	IN_30	Port#3 Bit0 Input
1	IN_31	Port#3 Bit1 Input
2	IN_32	Port#3 Bit2 Input
3	IN_33	Port#3 Bit3 Input
4	IN_34	Port#3 Bit4 Input
5	IN_35	Port#3 Bit5 Input
6	IN_36	Port#3 Bit6 Input
7	IN_37	Port#3 Bit7 Input
8	24V	+24V Power Input
9	GND	24V Ground Input

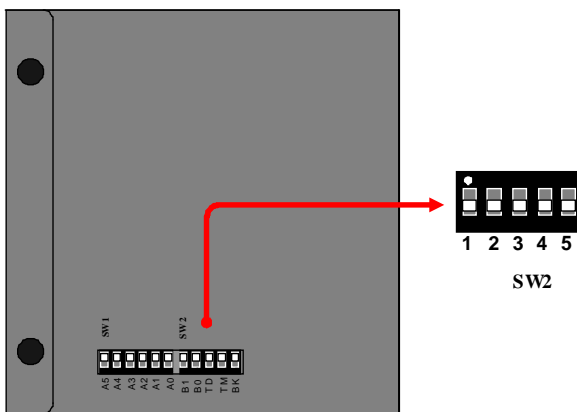
● SW1: node number setting



Pin	Label	On	Off
1	A5	1	0
2	A4	1	0
3	A3	1	0
4	A2	1	0
5	A1	1	0
6	A0	1	0

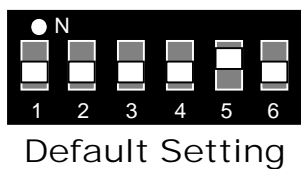
Note that node number = 32 x A5+16 x A4+8 x A3+4 x A2+2 x A1+A0. Default values are all off.

● SW2: function setting



Pin	Label	Description	On	Off
1	B0	*Baud-Rate Setting	1	0
2	B1	*Baud-Rate Setting	1	0
3	TD	Time-Out Status Latch	Enable	Disable
4	TM	Watch Dog Mode	Enable	Disable
5	TR	Termination Resistance	Enable	Disable

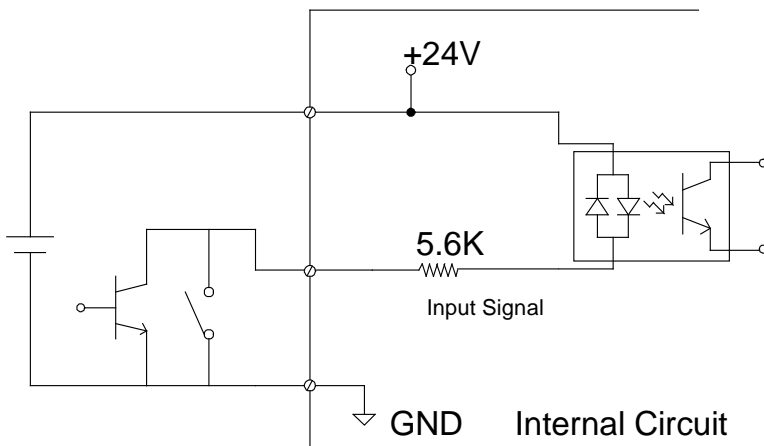
The table below shows the settings of transfer rates. Default values are all off.



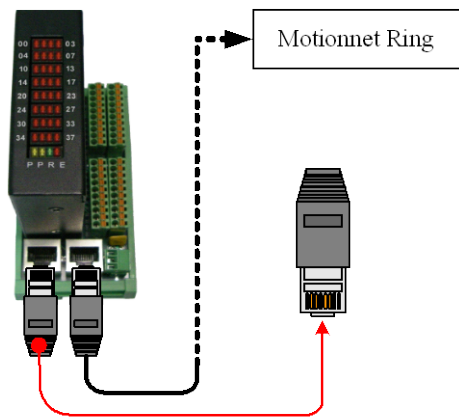
B0	B1	Transfer rate
OFF	OFF	20Mbps
ON	OFF	10Mbps
OFF	ON	5Mbps
ON	ON	2.5Mbps

Input Signal Circuit

- NPN



RS-485 Terminal Resistance



When you use 107-D1xx series Module as the last one in Motionnet Ring, it is necessary to put RS-485 terminate resistance on the RJ-45 connector (CN2).

Since 2016.07.01, 107-D1xx series has built in TR function, so you could turn on TR to replace RJ-45 terminate resistance