Product Type

107-D411H-NN

8-channel digital input and 8-channel digital output 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)

Output Type: NPN open drain MOSFET

Switch Capacity: each output channel is 500mA/channel maximum at 24V DC

Integral suppression on diodes for inductive loads

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

Over Current Protection: 4A (max) for each port (8-channel)

Power Input Voltage: +24V DC ± 10%

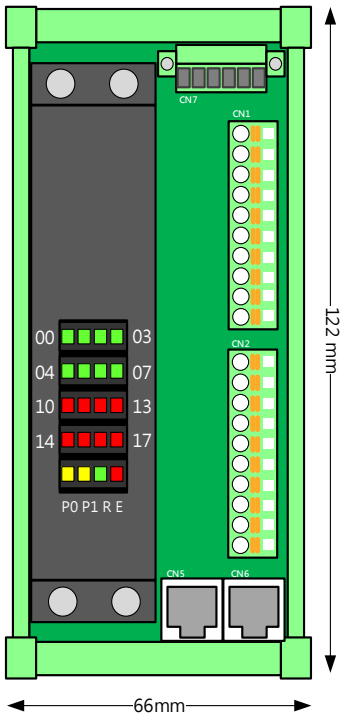
Power Consumption: 3W typical

Working Temperature: 0 ~ 60°C

Ordering Information

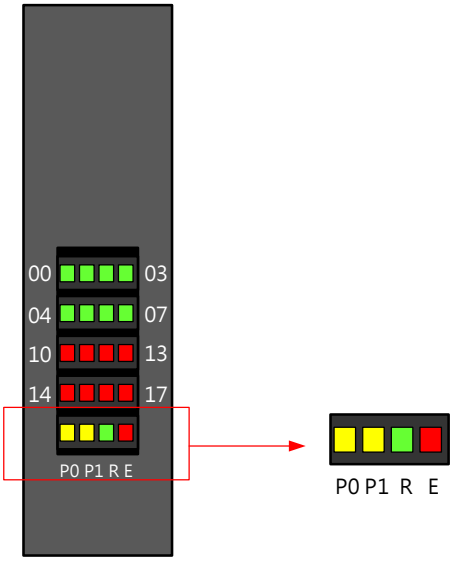
107-D411H-XN – 8-channel digital input and 8-channel digital output with NPN

IO interface



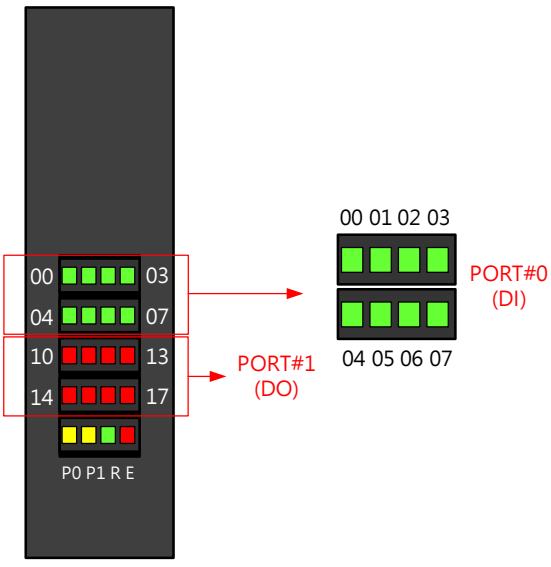
Label	Function
CN1	I/O Signal Connector
CN2	I/O Signal Connector
CN5	EtherCAT Communication IN
CN6	EtherCAT Communication OUT
CN7	Power Connector

LED Description



LED	Description
P0 - Yellow	DC +24V In Normal Level
P1 - Yellow	DC +5V Supply for Internal
R - Green	In Normal Communication
E - Red	Error Communication

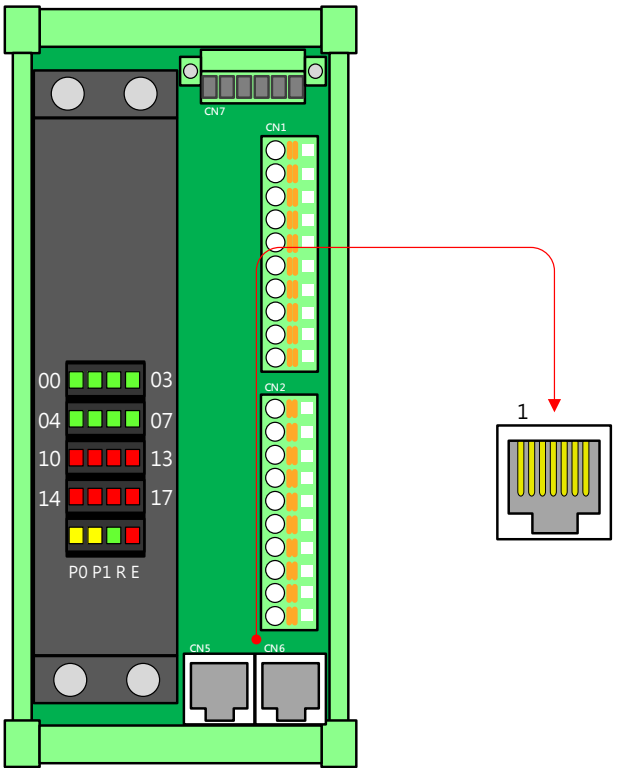
- **LED Description**



Disp	Label	Disp	Label
00	Port#0 Bit0	14	Port#1 Bit4
01	Port#0 Bit1	15	Port#1 Bit5
02	Port#0 Bit2	16	Port#1 Bit6
03	Port#0 Bit3	17	Port#1 Bit7
04	Port#0 Bit4		
05	Port#0 Bit5		
06	Port#0 Bit6		
07	Port#0 Bit7		
10	Port#1 Bit0		
11	Port#1 Bit1		
12	Port#1 Bit2		
13	Port#1 Bit3		

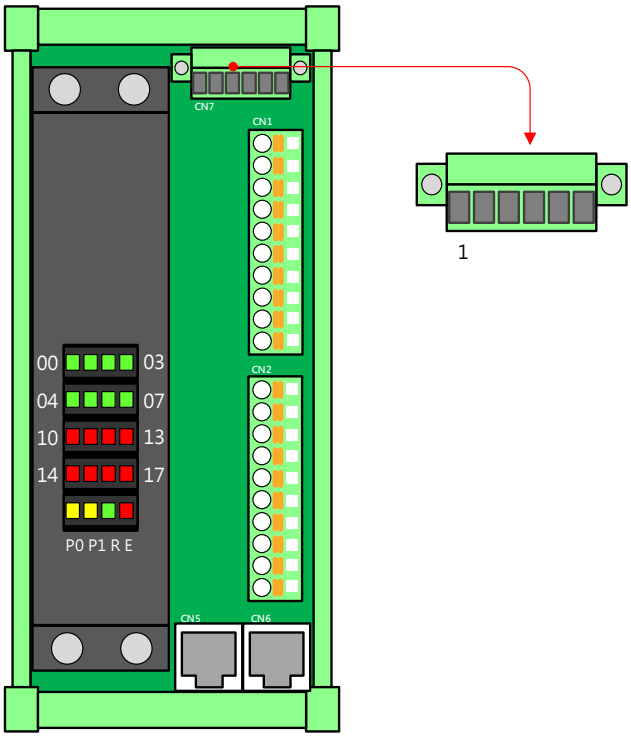
Connector Reference

- 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

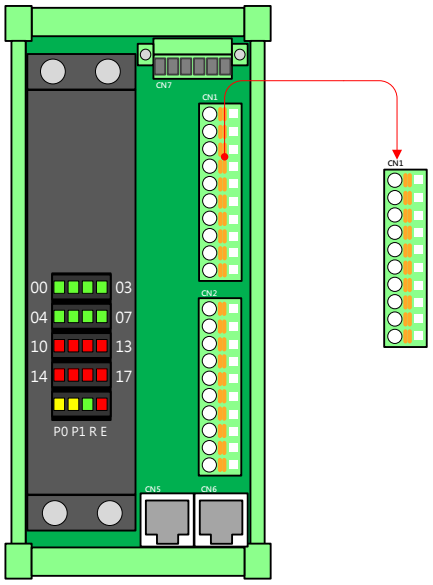
- Power connector



Pin	Label	Function
1	24VS	DC 24V Input for module internal
2	GNDS	DC 24V ground for module internal
3	FG	Field ground
4	24V	DC 24V Input for external
5	GND	DC 24V ground
6	FG	Field ground

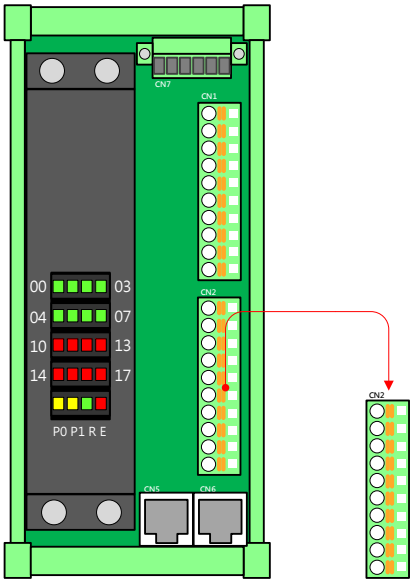
* Max. 8A input current each DC 24V contact.

- I/O control connector



CN1		
Pin	Label	Function
P00	IN_00	Port#0 Bit0 Input
P01	IN_01	Port#0 Bit1 Input
P02	IN_02	Port#0 Bit2 Input
P03	IN_03	Port#0 Bit3 Input
P04	IN_04	Port#0 Bit4 Input
P05	IN_05	Port#0 Bit5 Input
P06	IN_06	Port#0 Bit6 Input
P07	IN_07	Port#0 Bit7 Input
24V	24V	DC 24V Output
GND	GND	DC 24V Ground

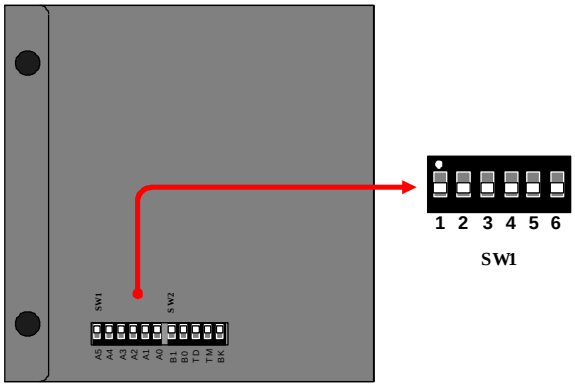
* Max. 100mA output current each 24V contact.



CN2		
Pin	Label	Function
P10	OUT_10	Port#1 Bit0 Output
P11	OUT_11	Port#1 Bit1 Output
P12	OUT_12	Port#1 Bit2 Output
P13	OUT_13	Port#1 Bit3 Output
P14	OUT_14	Port#1 Bit4 Output
P15	OUT_15	Port#1 Bit5 Output
P16	OUT_16	Port#1 Bit6 Output
P17	OUT_17	Port#1 Bit7 Output
24V	24V	DC 24V Output
GND	GND	DC 24V Ground

* Max. 100mA output current each 24V contact.

- SW1: node number setting

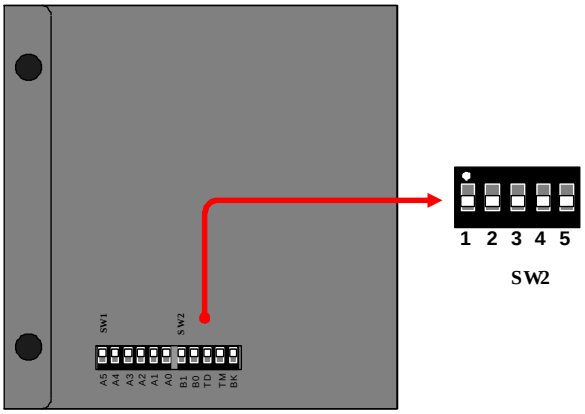


Pin	Label	On	Off
1	A5	1	0
2	A4	1	0
3	A3	1	0
4	A2	1	0
5	A1	1	0
6	A0	1	0

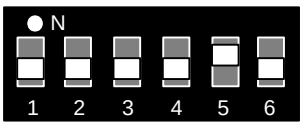
Note that node number = 32 x A5+16 x A4+8 x A3+4 x A2+2 x A1+A0. Default values are all off.

- 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
Note: BK Function work on to off and return to on.				



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

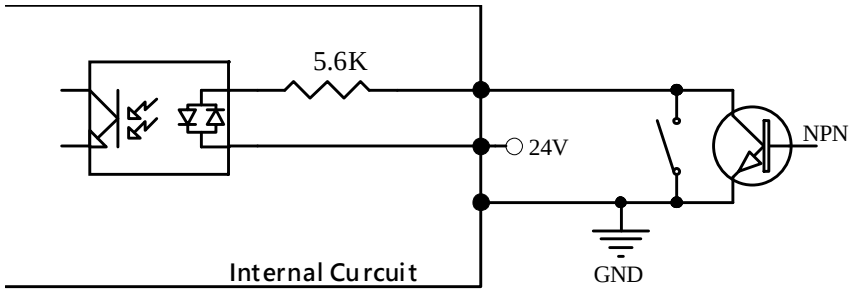


Default Setting

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

Input Signal Circuit

- NPN



Output Signal Circuit

- NPN