

◆ **Product Type**

207-D522-NN

32-channel digital input and 32-channel digital output module with pluggable terminal

◆ **Specifications**

Size: (L122 x W103 x H104 mm)

Protocol: EtherCAT

Cable Type: CAT5 UTP/STP Ethernet Cable

Surge Protection: 10KV

IO Isolation Voltage: 3750Vrms

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

Output Type: NPN open collector Darlington transistors

Switch Capacity: each output channel is 100mA/channel maximum at 24V DC

Integral suppression on diodes for inductive loads

Response Time: On to Off about 50μs, Off to On about 10μs

Over Current Protection: 1A (max) for each port (8-channel)

Power Input Voltage: +24V DC ± 10%

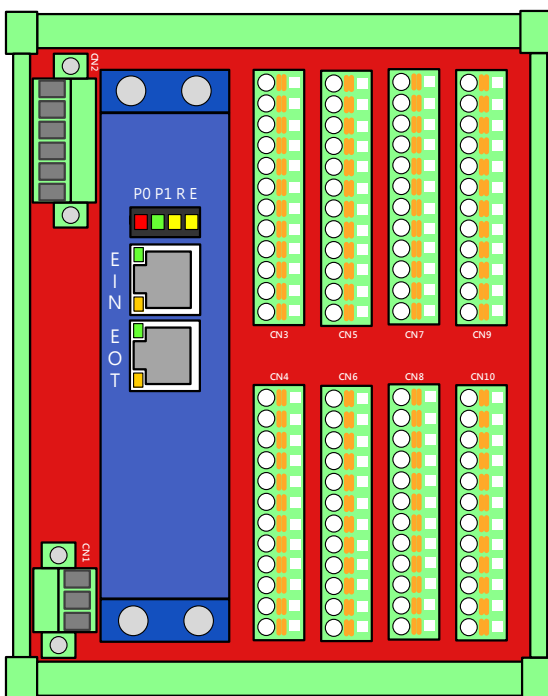
Power Consumption: 6W typical

Working Temperature: 0 ~ 60°C

◆ **Ordering Information**

207-D522-NN – 32-channel digital input with NPN and 32-channel digital output with NPN

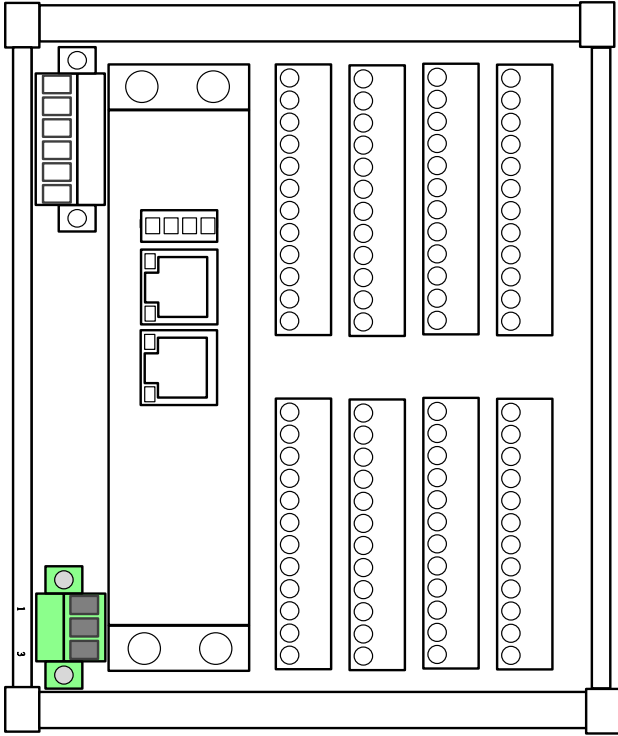
◆ **IO interface**



Label	Function
CN1	Power Connector for Module
CN2	Power Connector for External
CN3~CN6	Input Signal Connector
CN7~CN10	Output Signal Connector
EIN	EtherCAT Communication IN
EOUT	EtherCAT Communication OUT

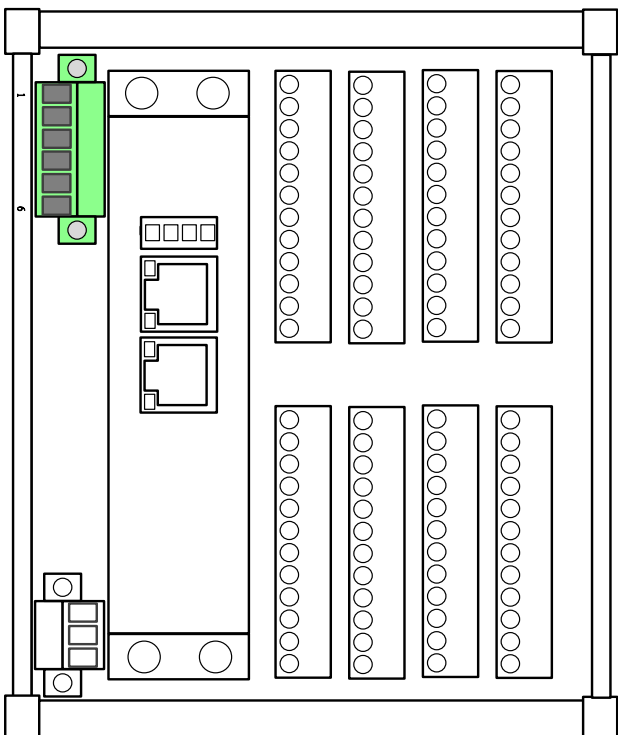
◆ Connector Reference

**CN1 – Module 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

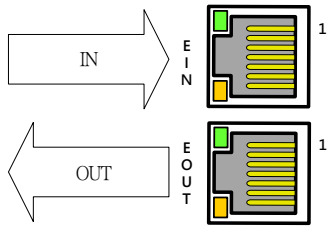
**CN2 – External Power connector**



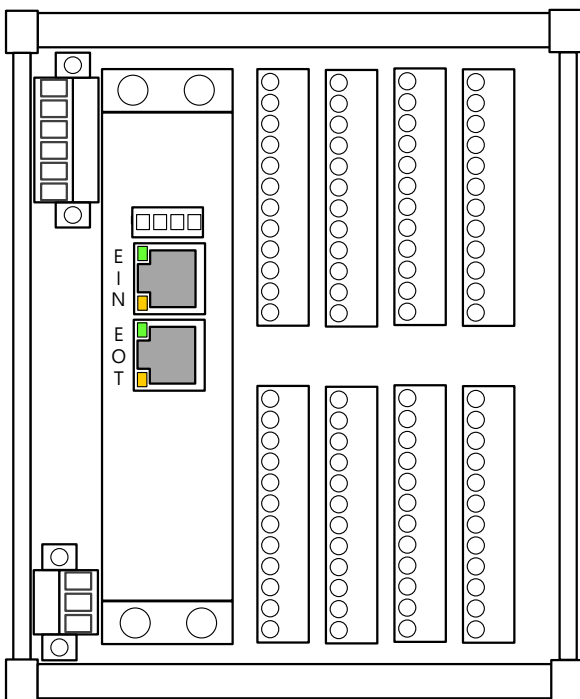
Pin	Label	Function
1	24V	DC 24V
2	GND	DC 24V ground
3	FG	Field ground
4	24V	DC 24V
5	GND	DC 24V ground
6	FG	Field ground

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

◆ EtherCAT Communication IN and OUT



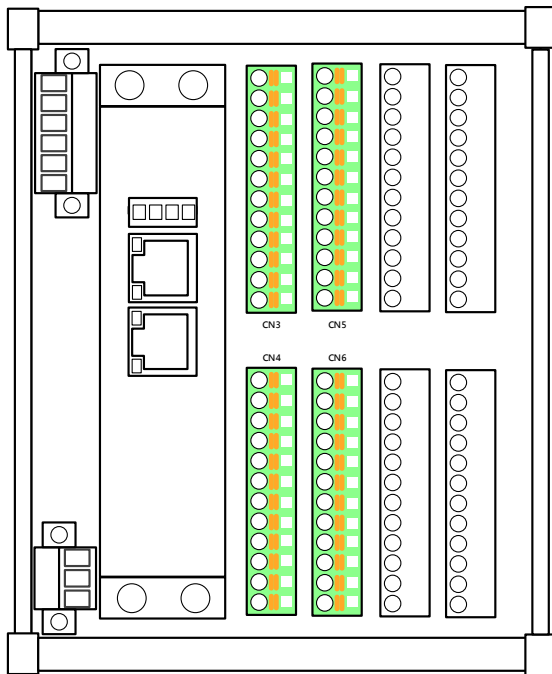
LED	Description
Green	Speed indicator: Green on – Operating as a 100/1000-Mbps connection. Off – Operating as a 10-Mbps connection.
Orange	Link/Activity indicator: Blinking – There is activity on this port. Off – No link is established.



Pin	Description
1	TX+
2	TX-
3	RX+
4	-
5	-
6	RX-
7	-
8	-

◆ I/O control connector

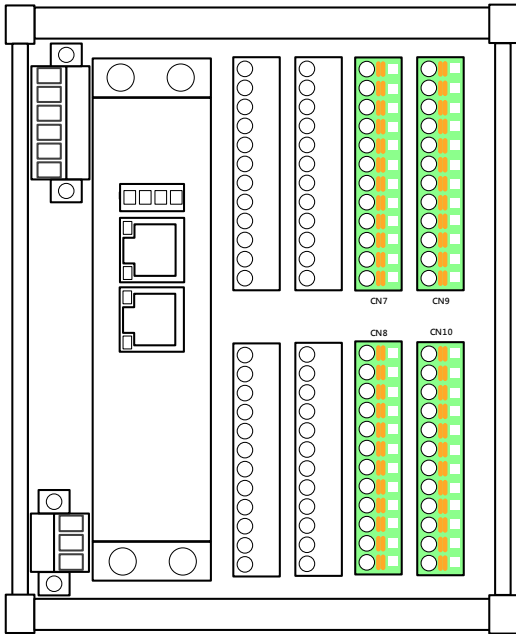
Digital Input Port0 ~ Port3



CN3 - I0			CN5 - I2		
Pin	Label	Function	Pin	Label	Function
1	24V	DC 24V	1	24V	DC 24V
2	24V	DC 24V	2	24V	DC 24V
3	00	Port#0 Bit0 Input	3	20	Port#2 Bit0 Input
4	01	Port#0 Bit1 Input	4	21	Port#2 Bit1 Input
5	02	Port#0 Bit2 Input	5	22	Port#2 Bit2 Input
6	03	Port#0 Bit3 Input	6	23	Port#2 Bit3 Input
7	04	Port#0 Bit4 Input	7	24	Port#2 Bit4 Input
8	05	Port#0 Bit5 Input	8	25	Port#2 Bit5 Input
9	06	Port#0 Bit6 Input	9	26	Port#2 Bit6 Input
10	07	Port#0 Bit7 Input	10	27	Port#2 Bit7 Input
11	GND	DC 24V Ground	11	GND	DC 24V Ground
12	GND	DC 24V Ground	12	GND	DC 24V Ground

CN4 - I1			CN6- I3		
Pin	Label	Function	Pin	Label	Function
1	24V	DC 24V	1	24V	DC 24V
2	24V	DC 24V	2	24V	DC 24V
3	10	Port#1 Bit0 Input	3	30	Port#3 Bit0 Input
4	11	Port#1 Bit1 Input	4	31	Port#3 Bit1 Input
5	12	Port#1 Bit2 Input	5	32	Port#3 Bit2 Input
6	13	Port#1 Bit3 Input	6	33	Port#3 Bit3 Input
7	14	Port#1 Bit4 Input	7	34	Port#3 Bit4 Input
8	15	Port#1 Bit5 Input	8	35	Port#3 Bit5 Input
9	16	Port#1 Bit6 Input	9	36	Port#3 Bit6 Input
10	17	Port#1 Bit7 Input	10	37	Port#3 Bit7 Input
11	GND	DC 24V Ground	11	GND	DC 24V Ground
12	GND	DC 24V Ground	12	GND	DC 24V Ground

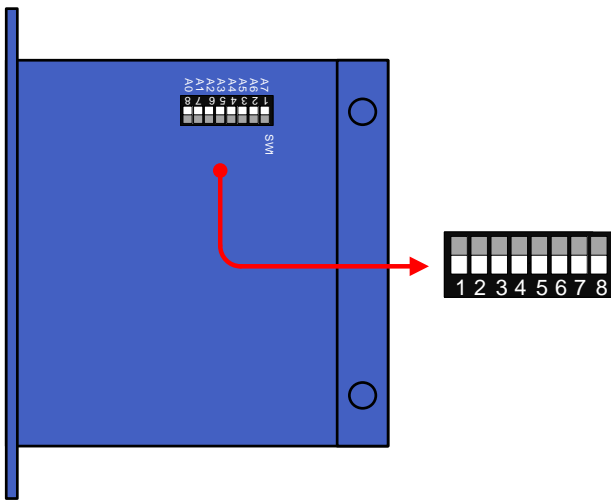
Digital Output Port4 ~ Port7



CN7 – Q0			CN9 – Q2		
Pin	Label	Function	Pin	Label	Function
1	24V	DC 24V	1	24V	DC 24V
2	24V	DC 24V	2	24V	DC 24V
3	40	Port#4 Bit0 Output	3	60	Port#6 Bit0 Output
4	41	Port#4 Bit1 Output	4	61	Port#6 Bit1 Output
5	42	Port#4 Bit2 Output	5	62	Port#6 Bit2 Output
6	43	Port#4 Bit3 Output	6	63	Port#6 Bit3 Output
7	44	Port#4 Bit4 Output	7	64	Port#6 Bit4 Output
8	45	Port#4 Bit5 Output	8	65	Port#6 Bit5 Output
9	46	Port#4 Bit6 Output	9	66	Port#6 Bit6 Output
10	47	Port#4 Bit7 Output	10	67	Port#6 Bit7 Output
11	GND	DC 24V Ground	11	GND	DC 24V Ground
12	GND	DC 24V Ground	12	GND	DC 24V Ground

CN8 – Q1			CN10- Q3		
Pin	Label	Function	Pin	Label	Function
1	24V	DC 24V	1	24V	DC 24V
2	24V	DC 24V	2	24V	DC 24V
3	50	Port#5 Bit0 Output	3	70	Port#7 Bit0 Output
4	51	Port#5 Bit1 Output	4	71	Port#7 Bit1 Output
5	52	Port#5 Bit2 Output	5	72	Port#7 Bit2 Output
6	53	Port#5 Bit3 Output	6	73	Port#7 Bit3 Output
7	54	Port#5 Bit4 Output	7	74	Port#7 Bit4 Output
8	55	Port#5 Bit5 Output	8	75	Port#7 Bit5 Output
9	56	Port#5 Bit6 Output	9	76	Port#7 Bit6 Output
10	57	Port#5 Bit7 Output	10	77	Port#7 Bit7 Output
11	GND	DC 24V Ground	11	GND	DC 24V Ground
12	GND	DC 24V Ground	12	GND	DC 24V Ground

◆ SW1: node number setting

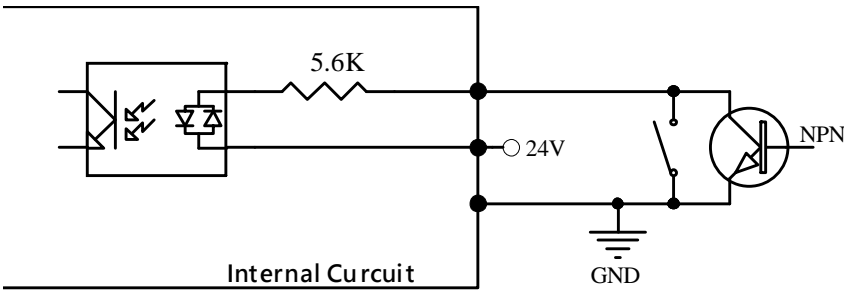


Pin	Label	On	Off
1	A7	1	0
2	A6	1	0
3	A5	1	0
4	A4	1	0
5	A3	1	0
6	A2	1	0
7	A1	1	0
8	A0	1	0

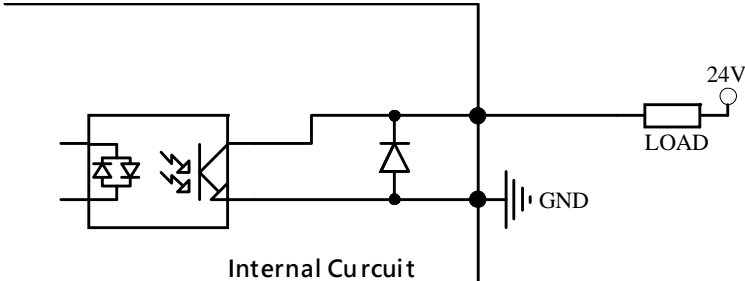
Note that node number =  $128 \cdot A7 + 64 \cdot A6 + 32 \cdot A5 + 16 \cdot A4 + 8 \cdot A3 + 4 \cdot A2 + 2 \cdot A1 + 1 \cdot A0$ .  
 Default values are all off.

◆ Signal Circuit

Input Signal Circuit (NPN type)

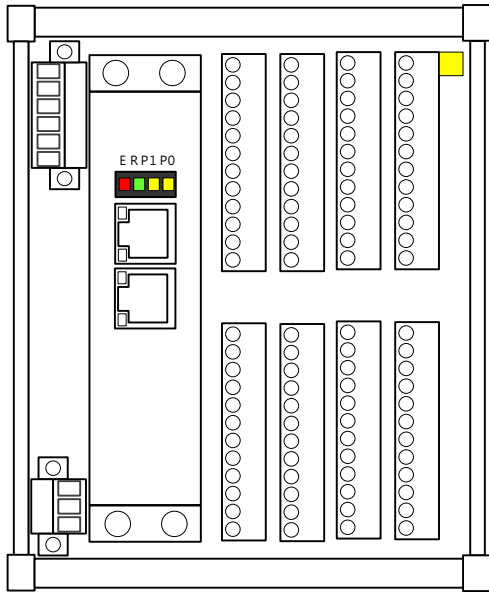


Output Signal Circuit (NPN type)



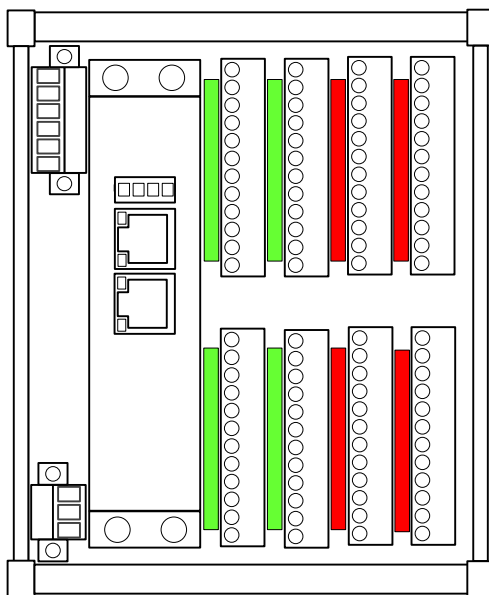
◆ LED Description

Module LED Indicator



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

DIO LED Indicator



LED	Description
Pn0 ~ Pn7 - Green	DI Port(n) Bit0 ~ Bit7, n = 0 ~ 3
Pn0 ~ Pn7 - Red	DO Port(n) Bit0 ~ Bit7, n = 4 ~ 7