COMIZOA

32CHANNEL DIGITAL NPN TYPE INPUT MODULE

ETS-DI32N-M (v1.00)

Table Of Contents

개요
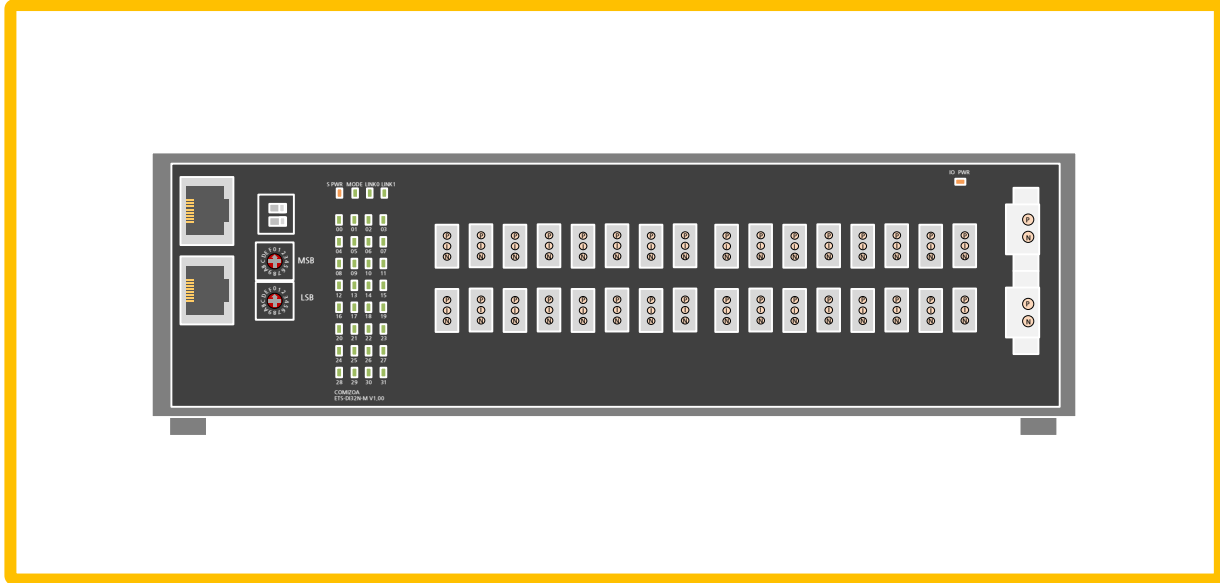
ETS - DI32N - M (Digital NPN Input 32ch)

ETS-DI32N-M는 커미조아의 EtherCAT 기반 제어기의 32채널 Digital 입력 모듈입니다.

각 채널의 내부 제어신호와 외부 입출력 신호는 포토커플러를 사용하여 절연됩니다.

본 매뉴얼은 ETS-DI32N-M의 하드웨어 구성과 기능에 대해 설명하는 하드웨어 매뉴얼 입니다.

◉ EtherCAT Slave Module
◉ CiA Standard 401 and ETG.5001 Modular Device Profile
◉ Supports Terminal Device ID
◉ Digital I/O Power Over Current Protection
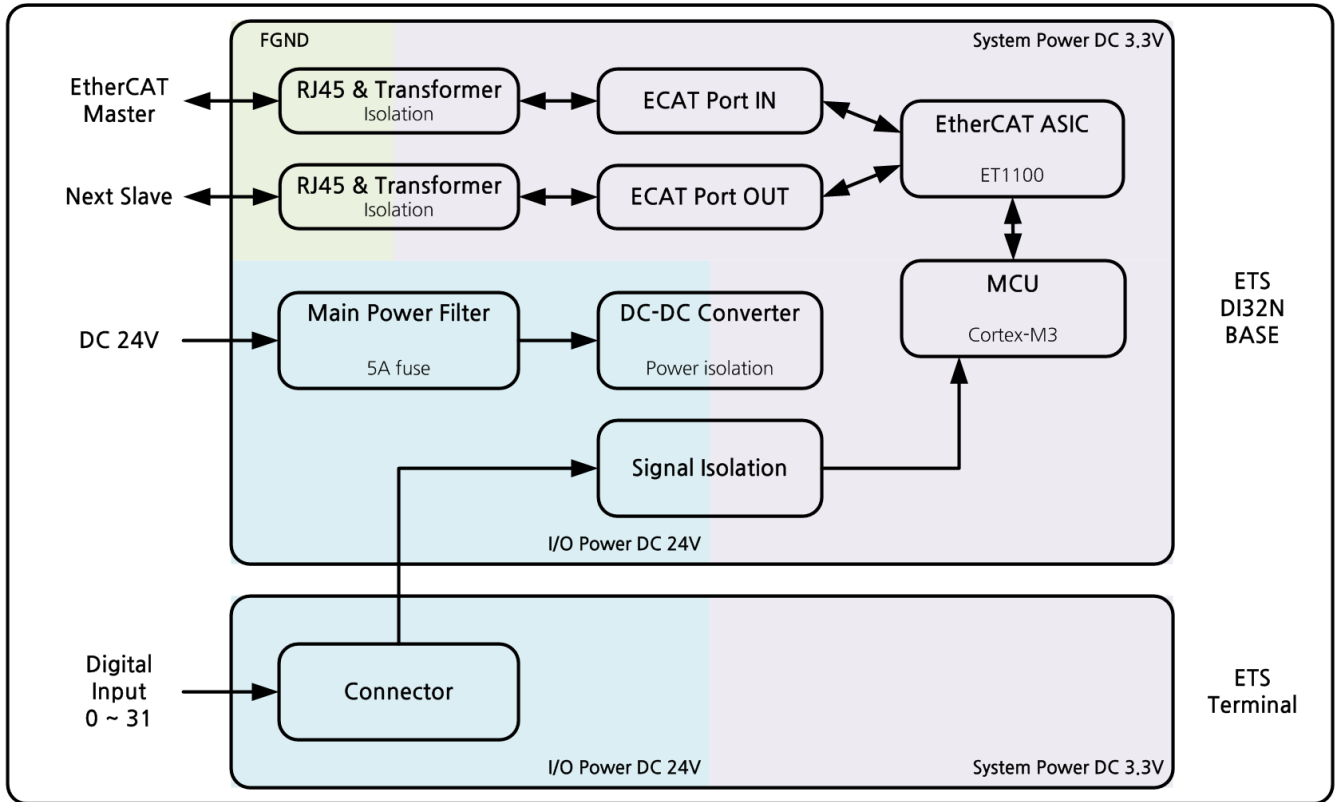◉ Digital Input 32(NPN)
◉ Independent System Power

Specification

Contents	Details
Dimension	180 * 53 * 35 (mm)
Operating Temperature	0°C ~ 50°C
Storage Temperature	-20°C ~ 80°C
Humidity	5% ~ 90%, non-condensing
Power consumption	System Power : 47mA @ DC 24V ± 5% I/O Power : 180mA @ DC 24V ± 5%

Environmental Specification

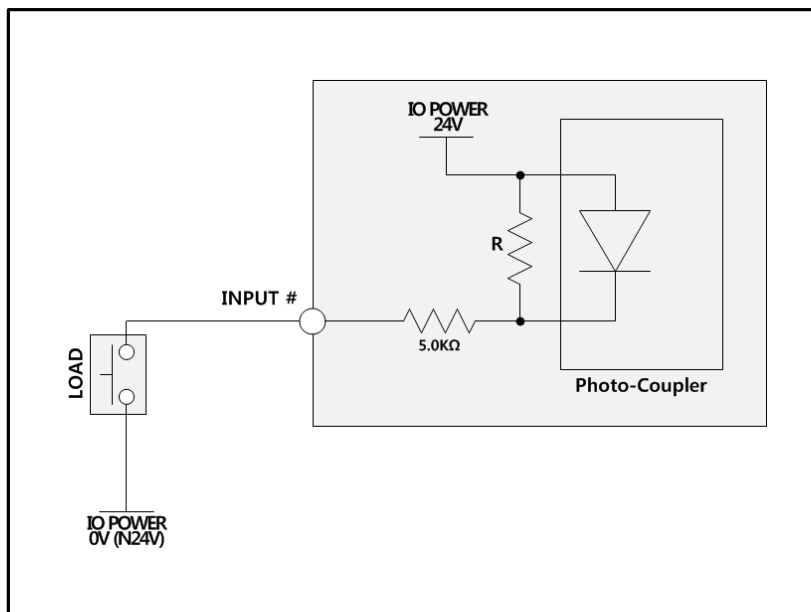| Contents	Details
Number of Inputs	32 Input
Input type	Current Sinking type (NPN)
Isolation	Photo-coupler (V_{iso} = 3,000V_{rms})
OFF State Voltage (logic ' 1')	Min. 11V DC ~ Max. 28.8 V DC (EN 61131-2, type 1/3)
On State Voltage (logic ' 0')	Min. 0V DC ~ Max. 5V DC (EN 61131-2, type 1/3)
Input Current	Max. 4.56mA per @ 24V DC
Input Impedance	Approx. 5KΩ (±5%)
Wiring Contact	I/O : 5264-03(3-Pin Molex) / Power : USL-3FBS-2P

Digital Input Specification

Dimension
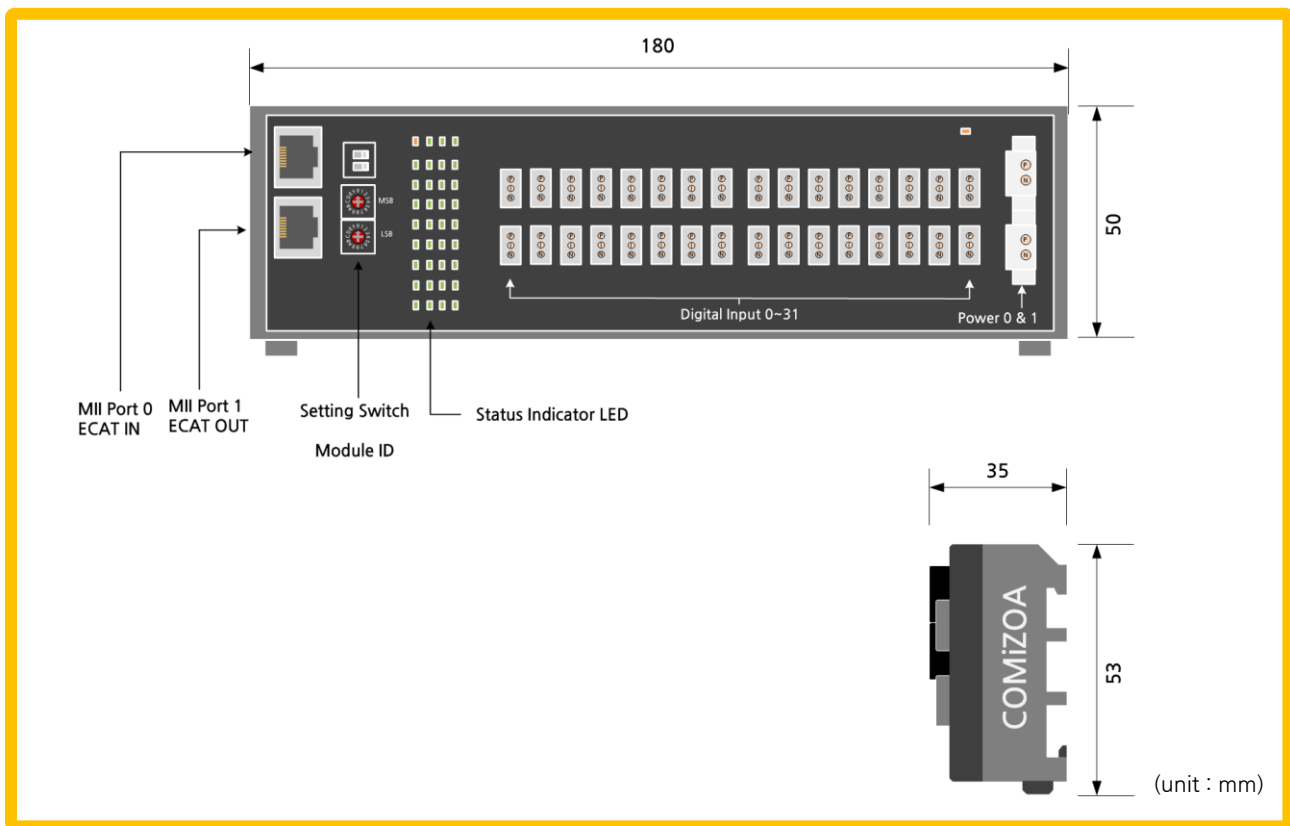
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Block Diagram

ETS-DI32N-M Block diagram

Circuit Diagram (Digital Input)

Interface Connect

EtherCAT Master

ETS NODE 0　　　　　　　　　ETS NODE 1　　　　　　　　　ETS NODE 2

ETS NODE 3　　　　　　　　　ETS NODE 4　　　　　　　　　ETS NODE 5
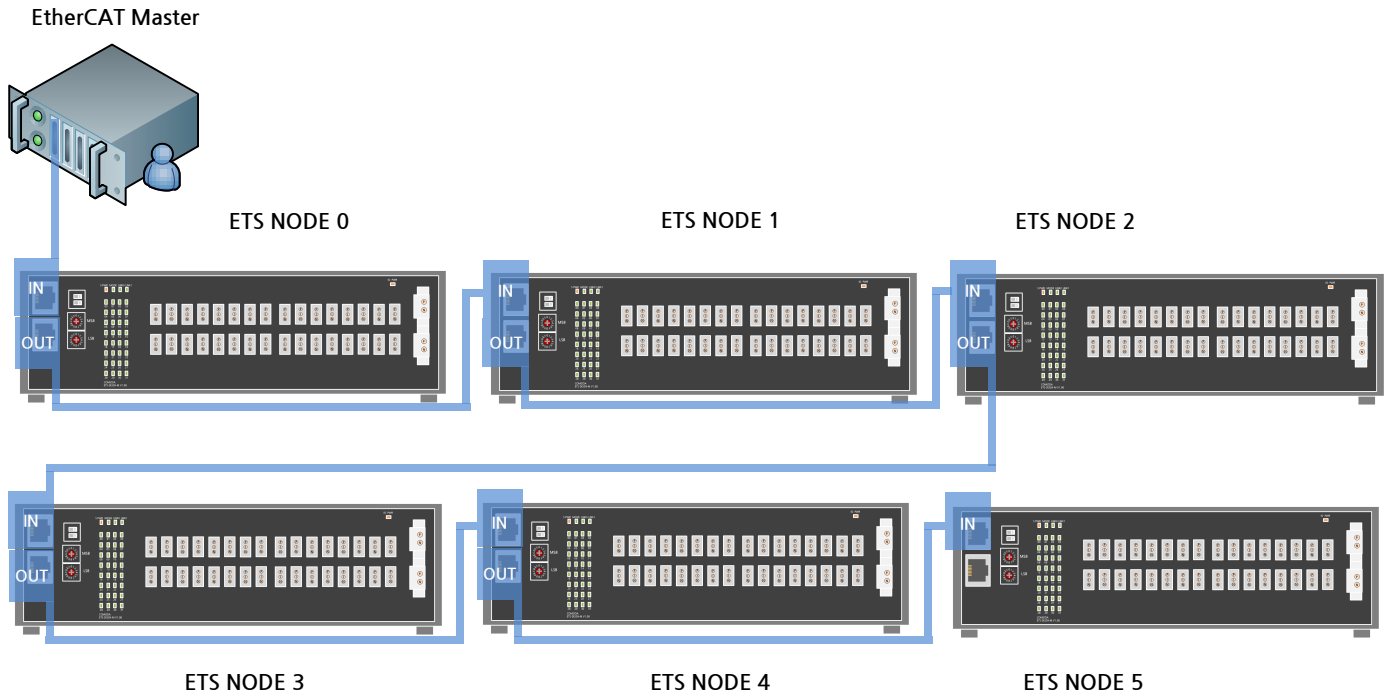
Device ID Setting

MSB / LSB	NODE ID setting	I.P = MSB *16 + LSB
	NODE ID range	1 ~ 256

Connector

◉ RJ45 Connector

	RJ45 IN		RJ45 OUT	
IN	1	TX+	1	TX+
	2	TX-	2	TX-
	3	RX+	3	RX+
	4	NC	4	NC
OUT	5	NC	5	NC
	6	RX-	6	RX-
	7	NC	7	NC
	8	NC	8	NC

◉ Contact Number

DI 0	DI 1	DI 2	DI 3	DI 4	DI 5	DI 6	DI 7	DI 8	DI 9	DI 10	DI 11	DI 12	DI 13	DI 14	DI 15	PWR0

DI 16	DI 17	DI 18	DI 19	DI 20	DI 21	DI 22	DI 23	DI 24	DI 25	DI 26	DI 27	DI 28	DI 29	DI 30	DI 31	PWR1

◉ PIN MAP

PWR 0, 1		
P	PWR DC P24V INPUT	
N	PWR DC N24V INPUT	

DI 0 ~ 31		
P	I/O PWR P24V OUTPUT	
I	DIGITAL INPUT	
N	I/O PWR N24V OUTPUT	
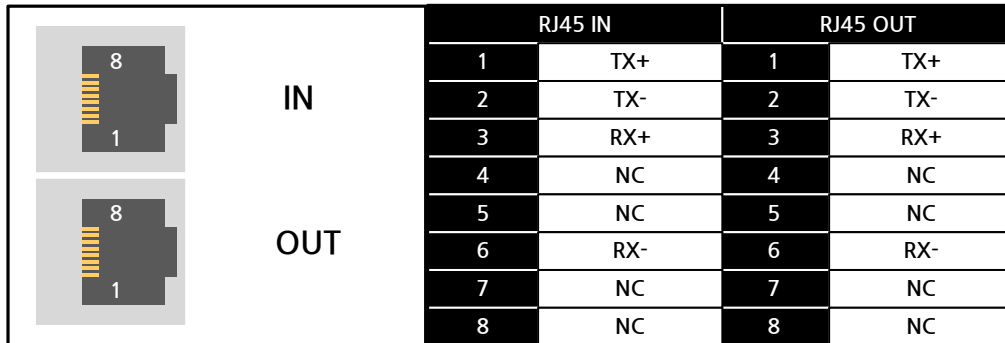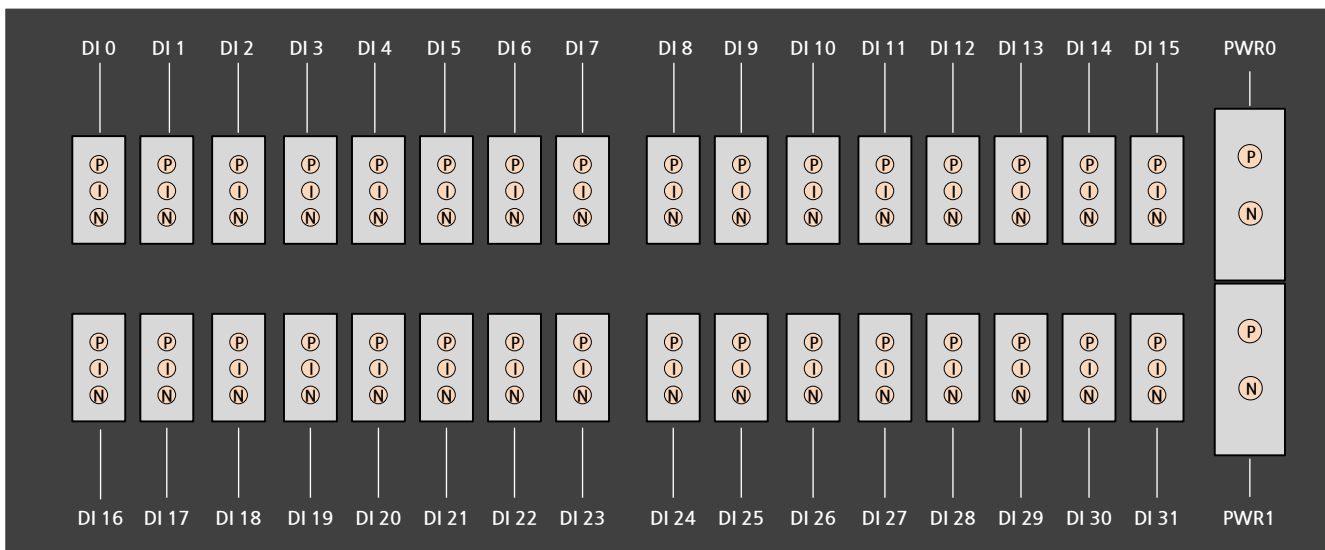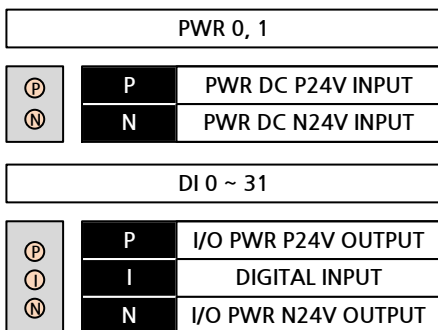
Status LED
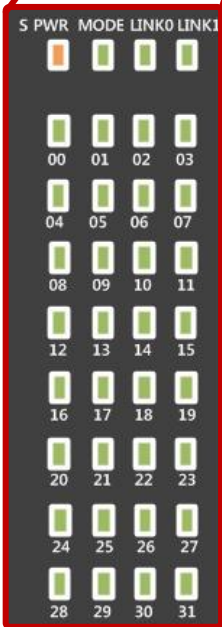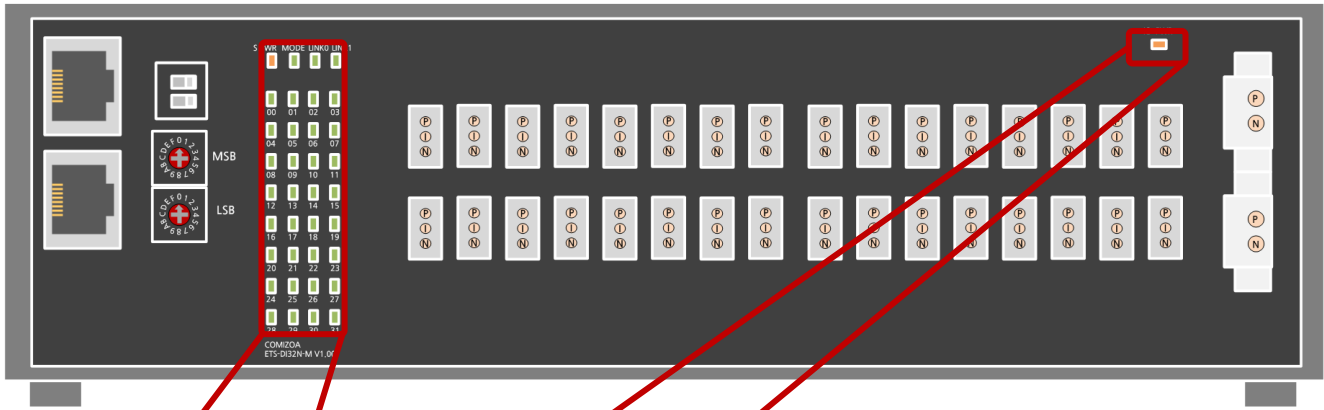
IO PWR	I/O POWER LED	ON	DIGITAL I/O POWER(24V DC) ON
		OFF	DIGITAL I/O POWER(24V DC) OFF
S PWR	SYSTEM POWER LED	ON	SYSTEM POWER(3.3V DC) ON
		OFF	SYSTEM POWER(3.3V DC) OFF
MODE	EtherCAT AL STATE LED	OFF	INIT
		Blinking(slow)	PRE-OP
		Single Flash	SAFE-OP
		ON	OP
		Flickering(fast)	BOOTSTRAP
LINK 0(1)	LINK 0(1) STATE LED	Blinking(slow)	MII Port 0(1) OPEN
		OFF	MII Port 0(1) Closed
DI 0-31	INPUT STATE LED	ON	INPUT ON STATE (LOGIC ' 1')
		OFF	INPUT OFF STATE (LOGIC ' 0')

Hardware Reference Manual Update List

No.	Version	Date	Changes in
1	1.00	2016.04.01	First Edition
2	1.01	2017.10.24	RJ-45 Connector Update

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