

ETS Hardware Reference Manual



16CHANNEL **DIGITAL INPUT** MODULE

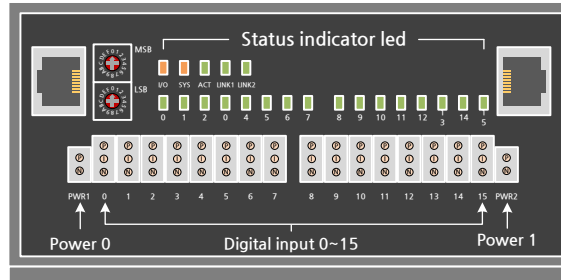
ETS-DI16P

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개요

ETS Series - ETS-DI16P (Digital PNP Input 16ch)

ETS-DI16P는 EtherCAT 기반 제어기인 ETS Series의 16채널 Digital 입력 모듈입니다.

각 채널의 내부 제어신호와 외부 입출력 신호는 포토커플러를 사용하여 절연됩니다.

본 매뉴얼은 ETS-DI16P의 하드웨어 구성과 기능에 대해 설명하는 하드웨어 매뉴얼입니다.

제품사양
Power Specification

ITEM	ETS-DI16P
Power Dissipation (System)	Max 40mA @ 24.0V DC
Power Dissipation (I/O)	Max 30mA @ 24.0V DC
Rated input Voltage	24V DC (- 15% / + 20%, ripple ratio within 5%) EN 61131-2

Comm. Specification

ITEM	ETS-DI16N
Transmission speed for EtherCAT	10/100 Mbit/s with Full Duplex
MDI/MDI-X	MDI/MDI-X auto-crossover.
ESD Protection	Contact Discharge (Typ.) 4kV
	Air Discharge (Typ.) 8kV

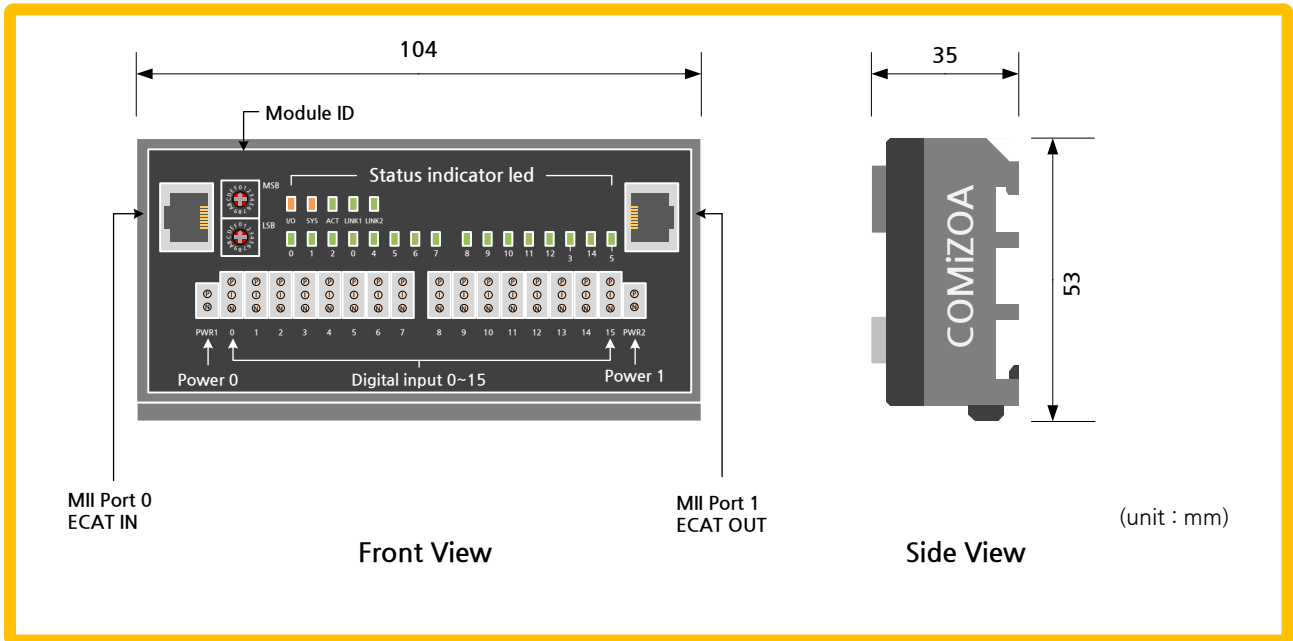
Digital Specification

ITEM	ETS-DI16P
Number of Inputs	16 input
Input type	Current Sourcing type (PNP)
Isolation	Photo-coupler ($V_{iso} = 3,000V_{rms}$)
On State Voltage (logic ' 1')	Min. 11V DC ~Max 28.8 V DC EN 61131-2, type 1/3
On State Voltage (logic ' 0')	Min. 5V DC EN 61131-2, type 1/3
On state Current	Max. 4.2mA per @ 28.8V DC
Input Impedance	Approx. 5.1K Ω ($\pm 5\%$)
Wiring contact	5264-03(DI 3Pin), 5264-02(PWR 2Pin)

Environmental Specification

ITEM	ETS-DI16P
Dimension	104 * 53 * 35 (mm)
Install	Industrial DIN rail
Operating Temperature Range	0°C ~ 50°C
Storage Temperature Range	-20°C ~ 80°C
Operating Humidity Range	5% ~ 90%, non-condensing
Storage Humidity Range	5% ~ 90%, non-condensing

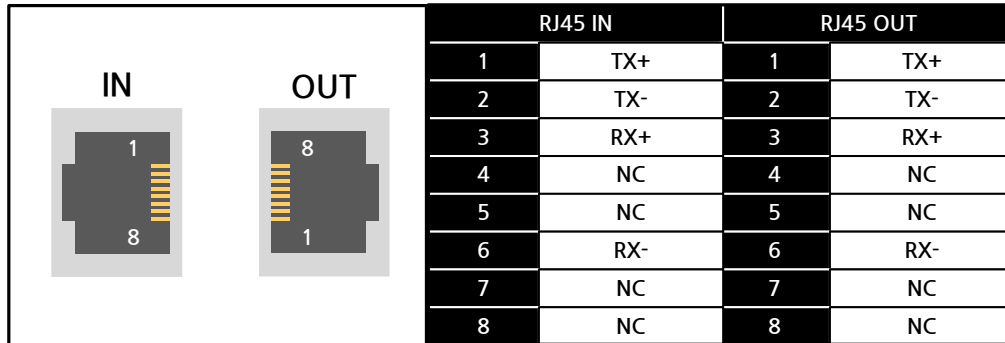
제품사양



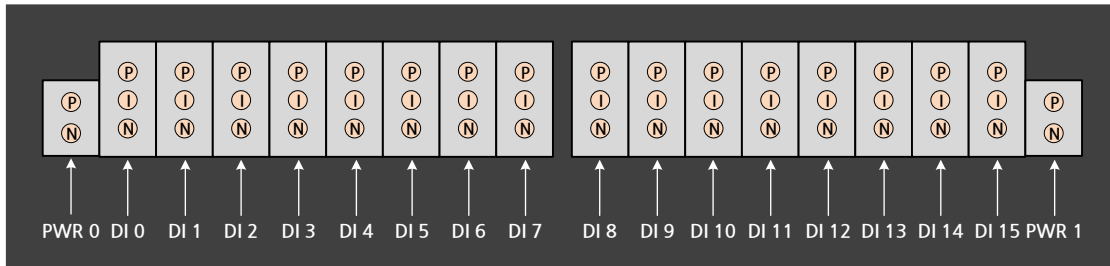
Dimension

Wiring

■ RJ45 Connector

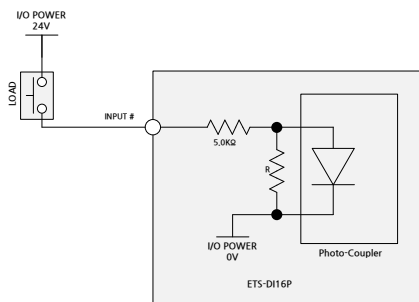


■ Contact Number

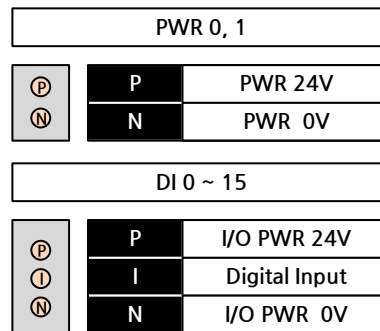


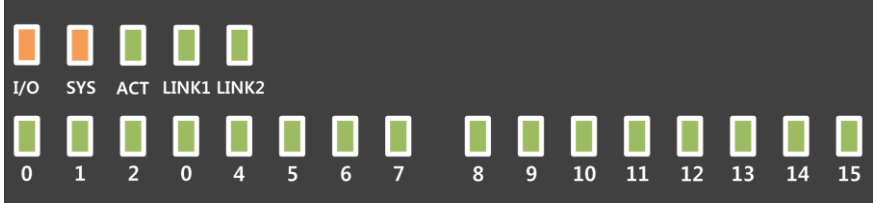
※ All numberings are zero based

■ Circuit Diagram



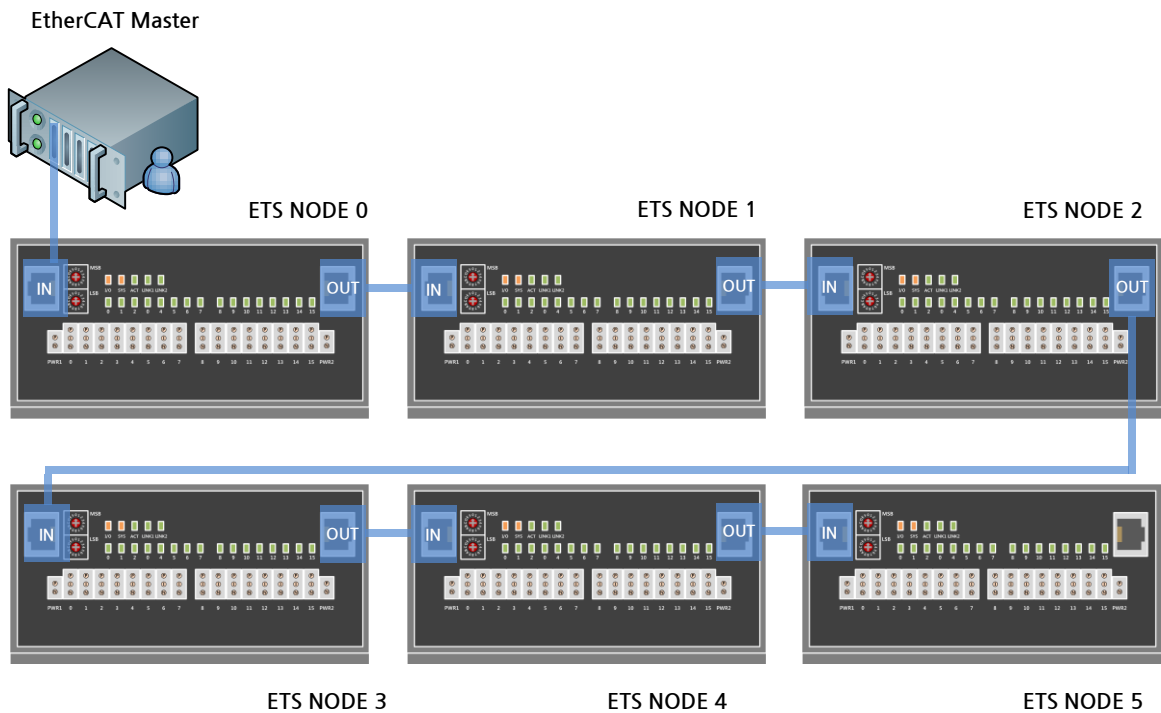
■ PIN MAP



Indicators


I/O	I/O POWER LED	ON	DIGITAL I/O POWER(24V DC) ON
		OFF	DIGITAL I/O POWER(24V DC) OFF
SYS	SYSTEM POWER LED	ON	SYSTEM POWER(3.3V DC) ON
		OFF	SYSTEM POWER(3.3V DC) OFF
ACT	EtherCAT AL STATE LED	OFF	INIT
		Blinking(slow)	PRE-OP
		Single Flash	SAFE-OP
		ON	OP
LINK 0(1)	LINK 0(1) STATE LED	Flickering(fast)	BOOTSTRAP
		Blinking(slow)	MII Port 0(1) OPEN
		OFF	MII Port 0(1) Closed
DI 0-15	INPUT STATE LED	ON	INPUT ON STATE (LOGIC '1')
		OFF	INPUT ON STATE (LOGIC '0')

Interface Connect



Device ID Setting

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

Hardware Reference Manual Update List

No.	Version	Date	Changes in
1			First Edition
2	1.01	2016.02.29	글꼴변경 (나눔고딕, 굴림)

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