EVS Hardware Reference Manual

COMIZOA

32CHANNEL DIGITAL NPN TYPE OUTPUT MODULE

EVS-DO32N

Table Of Contents

개요
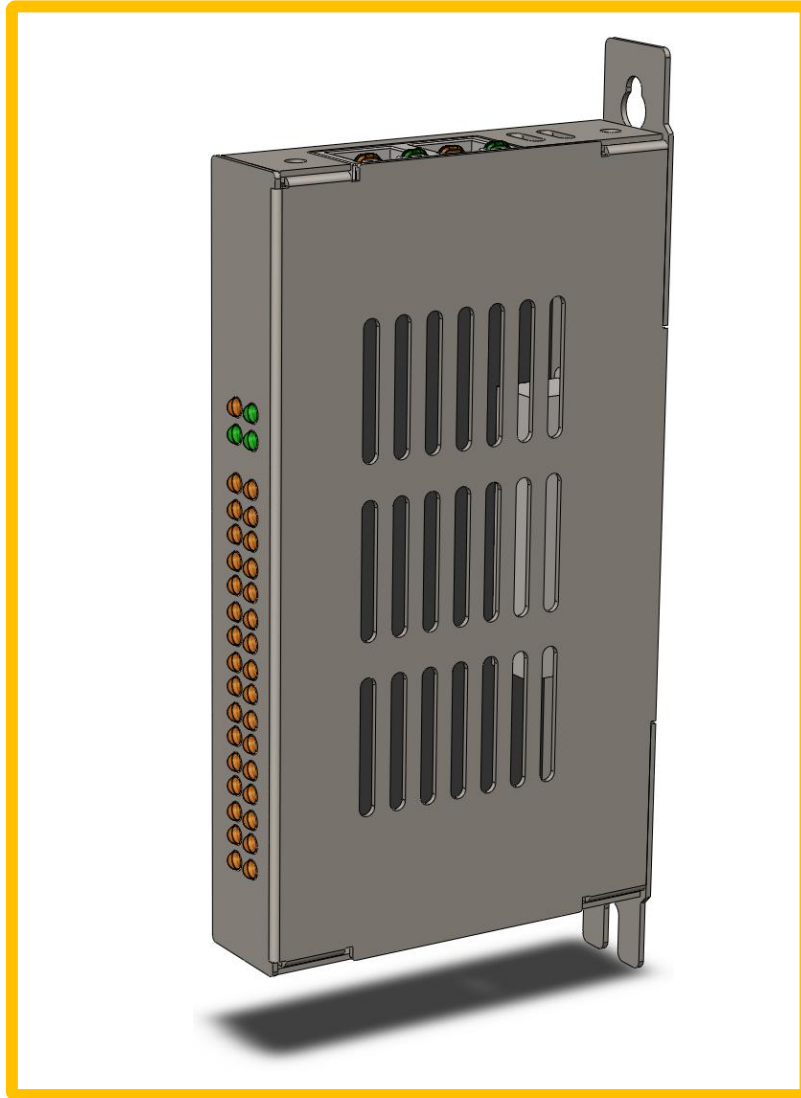
EVS - DO32N (Digital NPN Output 32ch)

EVS-DO32N은 커미조아의 EtherCAT 기반 제어기의 32채널 Digital 출력 모듈입니다.

각 채널의 내부 제어신호와 외부 입출력 신호는 포토커플러를 사용하여 절연됩니다.
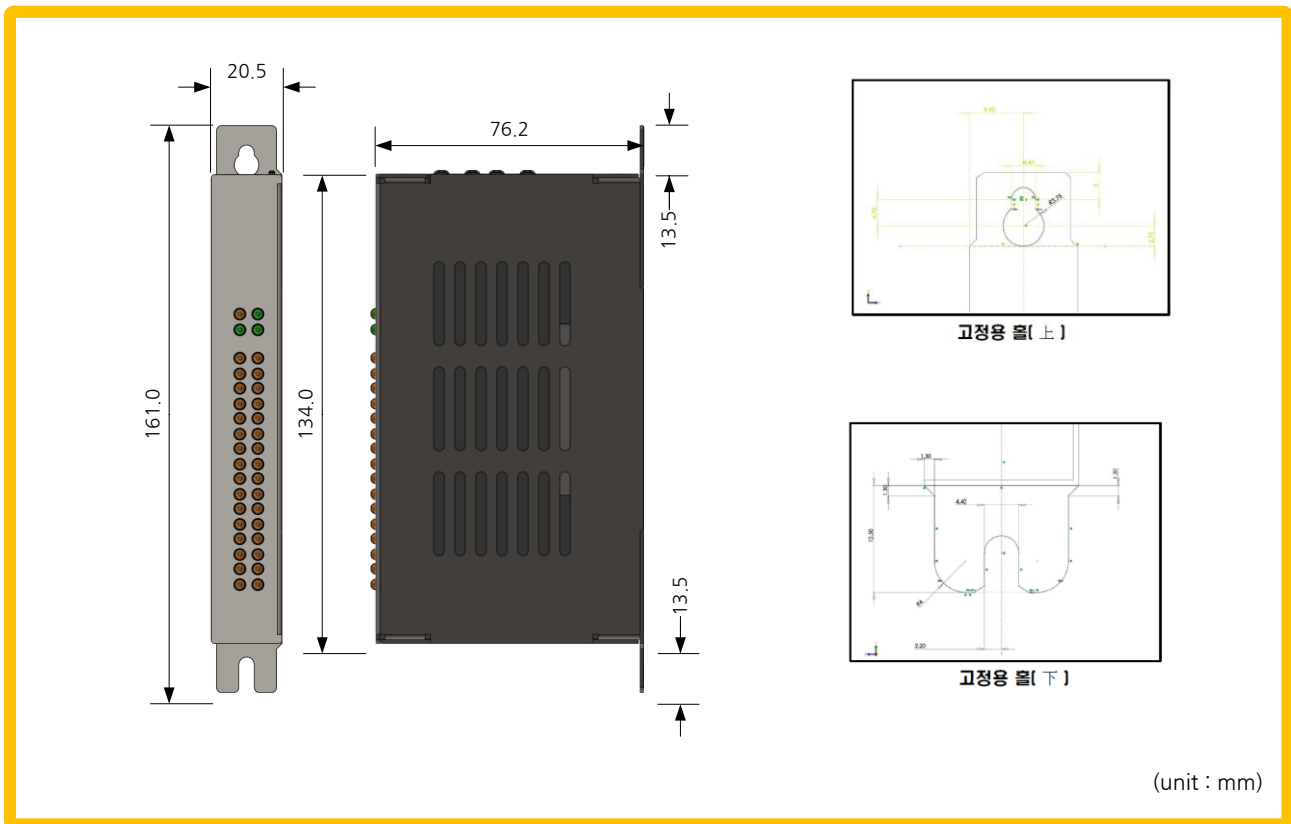
본 매뉴얼은 EVS-DO32N의 하드웨어 구성과 기능에 대해 설명하는 하드웨어 매뉴얼 입니다.

제품사양

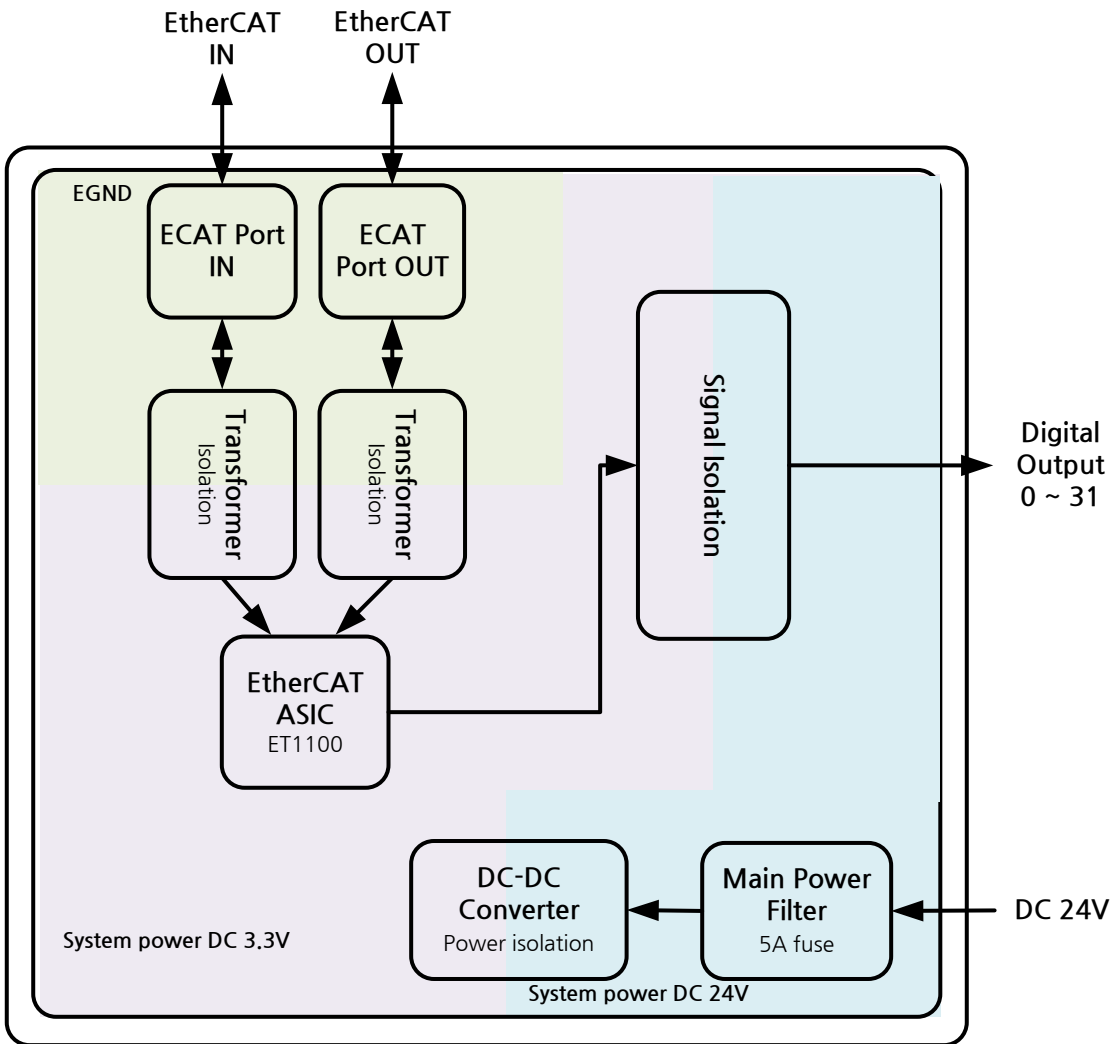| Contents	Details
Dimension	20.5 x 76.2 x 161.0 (mm)
Operating Temperature	0°C ~ 50°C
Storage Temperature	-20°C ~ 80°C
Humidity	5% ~ 90%, non-condensing
Power consumption	Power supply input +24V DC ± 5%, 300mA max
EtherCAT	2 Port (RJ-45 Connector)
	100 Mbps, Full-Duplex (Enable Auto-negotiation)

Environmental Specification

ITEM	EVS-DO32N
Number of Inputs	32 output (1 Wire)
Output type	MOSFET with Common Ground (NPN)
Isolation	Photo-coupler(Viso=3,000Vrms)
OFF State Current	Max. 100uA / Point
On State Max Sink Current	Max. 500mA / Point
Rds(On state resistance)	Max. 1.4Ω (±5%)
Over-Temperature Shutdown	160°C
Over-Current Shutdown	0.7A (Min.) ~ 2A (Max.)

Digital Output Specification

고정용 홀[上]

고정용 홀[下]

(unit : mm)

Block diagram

EtherCAT IN

EtherCAT OUT

EGND

ECAT Port IN

ECAT Port OUT

Transformer
Isolation

Transformer
Isolation

Signal Isolation

Digital Output 0 ~ 31

EtherCAT ASIC
ET1100

DC-DC Converter
Power isolation

Main Power Filter
5A fuse

DC 24V

System power DC 3.3V

System power DC 24V

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Connector

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

IN   OUT

ETHERCAT CONNECTOR
(CAT.5E ↑)

Pin #		Pin #		Pin #		Pin #	
1	VCC(+24V)	21	OUTPUT #00	40	OUTPUT #19	60	GROUND
2	VCC(+24V)	22	OUTPUT #01	41	OUTPUT #20	61	GROUND
3	VCC(+24V)	23	OUTPUT #02	42	OUTPUT #21	62	GROUND
4	VCC(+24V)	24	OUTPUT #03	43	OUTPUT #22	63	GROUND
5	VCC(+24V)	25	OUTPUT #04	44	OUTPUT #23	64	GROUND
6	VCC(+24V)	26	OUTPUT #05	45	OUTPUT #24	65	GROUND
7	VCC(+24V)	27	OUTPUT #06	46	OUTPUT #25	66	GROUND
8	VCC(+24V)	28	OUTPUT #07	47	OUTPUT #26	67	GROUND
9	VCC(+24V)	29	OUTPUT #08	48	OUTPUT #27	68	GROUND
10	VCC(+24V)	30	OUTPUT #09	49	OUTPUT #28	69	GROUND
11	VCC(+24V)	31	OUTPUT #10	50	OUTPUT #29	70	GROUND
12	VCC(+24V)	32	OUTPUT #11	51	OUTPUT #30	71	GROUND
13	VCC(+24V)	33	OUTPUT #12	52	OUTPUT #31	72	GROUND
14	VCC(+24V)	34	OUTPUT #13	53	-	73	GROUND
15	VCC(+24V)	35	OUTPUT #14	54	-	74	GROUND
16	VCC(+24V)	36	OUTPUT #15	55	-	75	GROUND
17	VCC(+24V)	37	OUTPUT #16	56	-	76	GROUND
18	VCC(+24V)	38	OUTPUT #17	57	-	77	GROUND
19	VCC(+24V)	39	OUTPUT #18	58	-	78	GROUND
20	VCC(+24V)			59	-		

I/O CONNECTOR (D-SUB 78PIN)

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Status LED
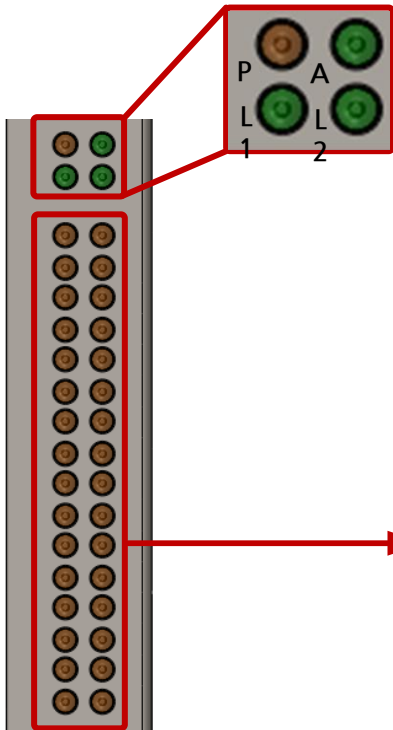
P	BOX POWER LED	ON	BOX POWER(3.3V DC) ON
		OFF	BOX POWER(3.3V DC) OFF
A	EtherCAT AL STATE LED	OFF	INIT
		Blinking(slow)	PRE-OP
		Single Flash	SAFE-OP
		ON	OP
		Flickering(fast)	BOOTSTRAP
L1	LINK 0 STATE LED	Blinking(slow)	MII Port IN OPEN
		OFF	MII Port IN Closed
L2	LINK 1 STATE LED	Blinking(slow)	MII Port OUT OPEN
		OFF	MII Port OUT Closed

0-31	OUTPUT STATE LED	ON	OUTPUT ON STATE (LOGIC '1')
		OFF	OUTPUT OFF STATE (LOGIC '0')

DIGITAL OUTPUT CIRCUIT
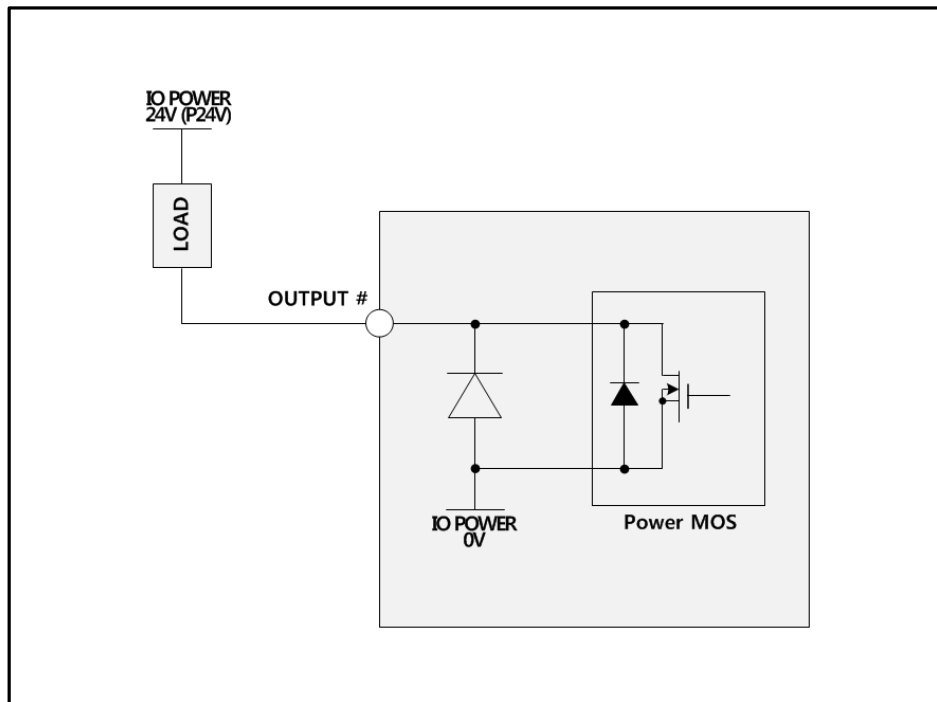
Hardware Reference Manual Update List

No.	Version	Date	Changes in
1	1.00	2015.07.29	First Edition
2	1.01	2015.08.11	Digital Output Circuit 오기 수정
3	1.02	2016.03.01	폰트 수정 (나눔 고딕, 굴림)

COMIZOA *CO.,LTD*
http://www.comizoa.com
Tel) +82 - 42 - 936 - 6500

Fax) +82 - 42 - 936 - 6507

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