

ECS Hardware Reference Manual



4CHANNEL ANALOG OUTPUT MODULE

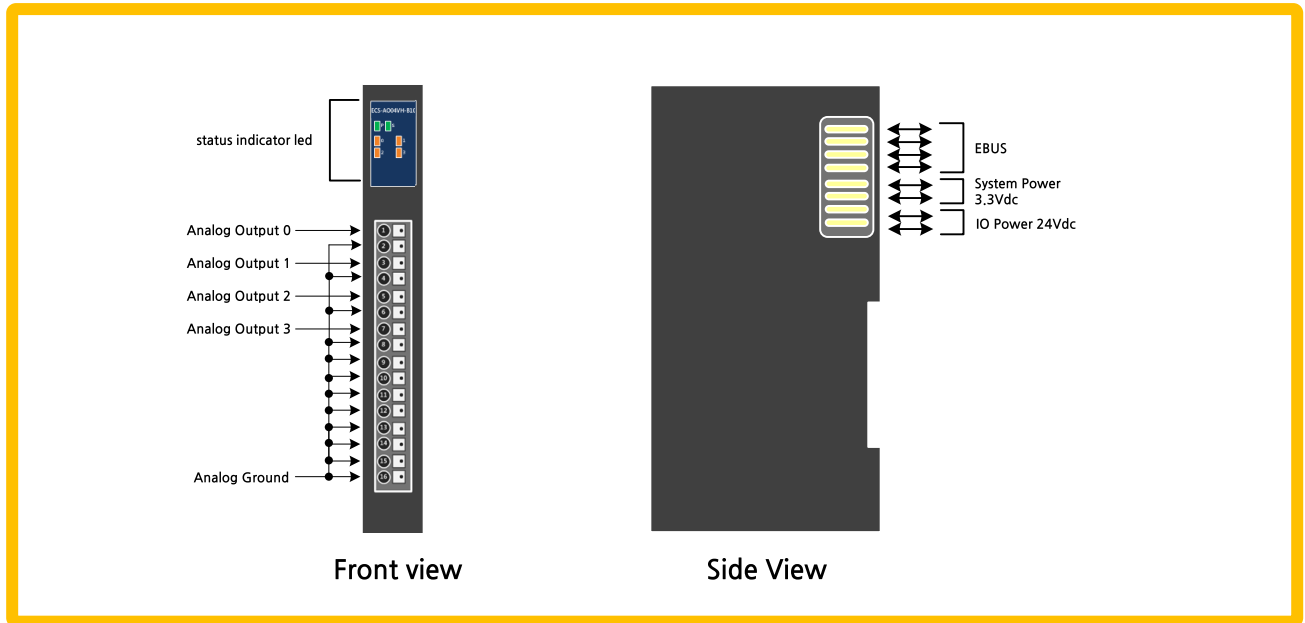
ECS-A004VH

FEB 2016
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개요

ECS Series - ECS-AO04VH (Analog Output 4ch)

ECS-AO04VH는 EtherCAT 기반 제어기인 ECS Series의 4채널 Analog 출력 모듈입니다.

각 채널의 내부 제어신호와 외부 입출력 신호는 포토커플러를 사용하여 절연됩니다.

본 매뉴얼은 ECS-AO04VH의 하드웨어 구성과 기능에 대해 설명하는 하드웨어 매뉴얼입니다.

제품사양
■ Analog Specification

Contents	Details
Number of Outputs	4 Output
Output type	Single-ended
Resolution	16bit(2's Compliment)
Voltage Output Range	± 10V DC
Isolation	Non-isolated Between Channels I/O to Logic : Photo-coupler isolation (3KV)
Error	Offset Error : ± 6mV Gain Error : ± 0.3%
Load Resistance	Min. 5KΩ
Conversion Time	Min. 200us / All Channels
Wiring contact	LSF-SMT3,5-16P (Weidmuller)

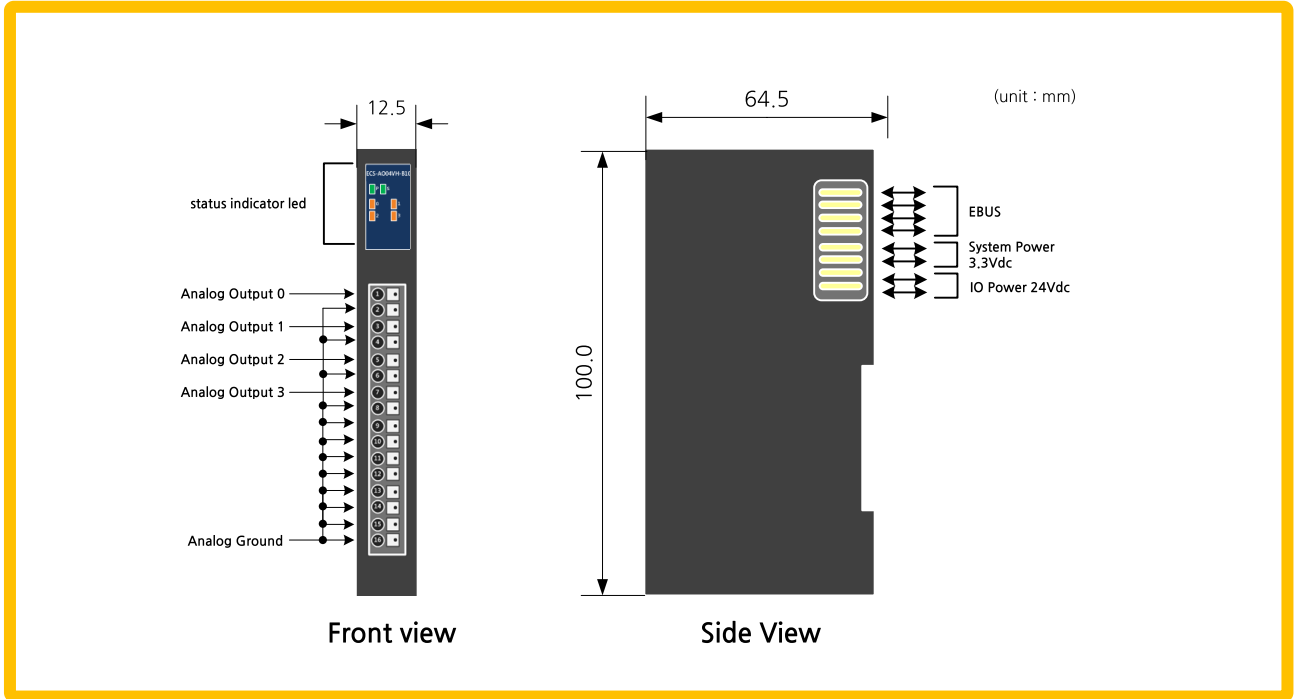
■ Power Specification

ITEM	Details
Power Dissipation(System)	Max. 100mA @ 5.0V DC
Power Dissipation(I/O)	Max. 80mA @ 24.0V DC
Rated Input Voltage	24V DC (-15%/+20%, ripple ratio within 5%) EN 61131-2

■ Environmental Specification

ITEM	Details
Dimension	65 * 100 * 12.5 (mm)
Install	Industrial DIN rail
Operating Temperature Range	0℃ ~ 50℃
Storage Temperature Range	-20℃ ~ 80℃
Operating Humidity Range	5% ~ 90%RH, non-condensing
Storage Humidity Range	5% ~ 90%RH, non-condensing

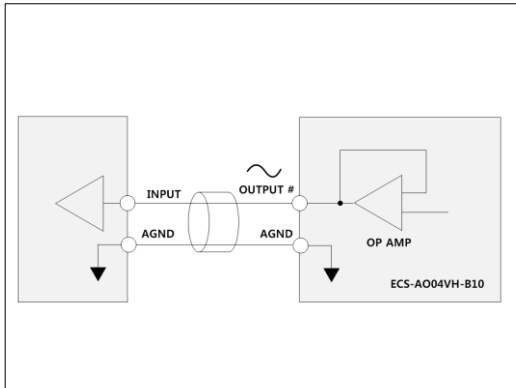
제품사양



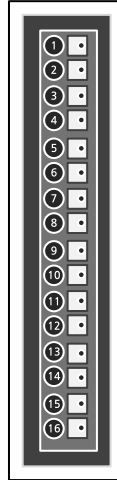
Dimension

Wiring

■ Circuit Diagram

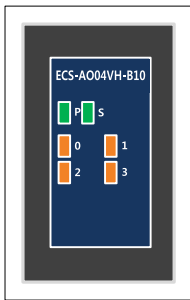


■ PIN MAP



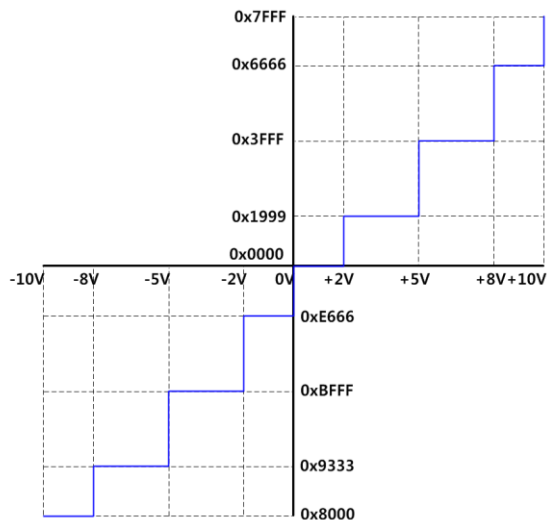
1	OUTPUT0
2	AGND
3	OUTPUT1
4	AGND
5	OUTPUT2
6	AGND
7	OUTPUT3
8	AGND
9	AGND
10	AGND
11	AGND
12	AGND
13	AGND
14	AGND
15	AGND
16	AGND

Indicators



P	SYSTEM POWER LED	ON	SYSTEM POWER(5V DC) ON
		OFF	SYSTEM POWER(5V DC) OFF
S	EtherCAT AL STATE LED	OFF	INIT
		Blinking(slow)	PRE-OP
		Single Flash	SAFE-OP
		ON	OP
		Flickering(fast)	BOOTSTRAP
0-3	INPUT STATE LED	ON	Analog Out State
		OFF	Power-Down State

Analog Data



Hardware Reference Manual Update List

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

ECS Reference Manual

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