

# ECS Hardware Reference Manual



2CHANNEL ANALOG OUTPUT MODULE

ECS-AO02IH

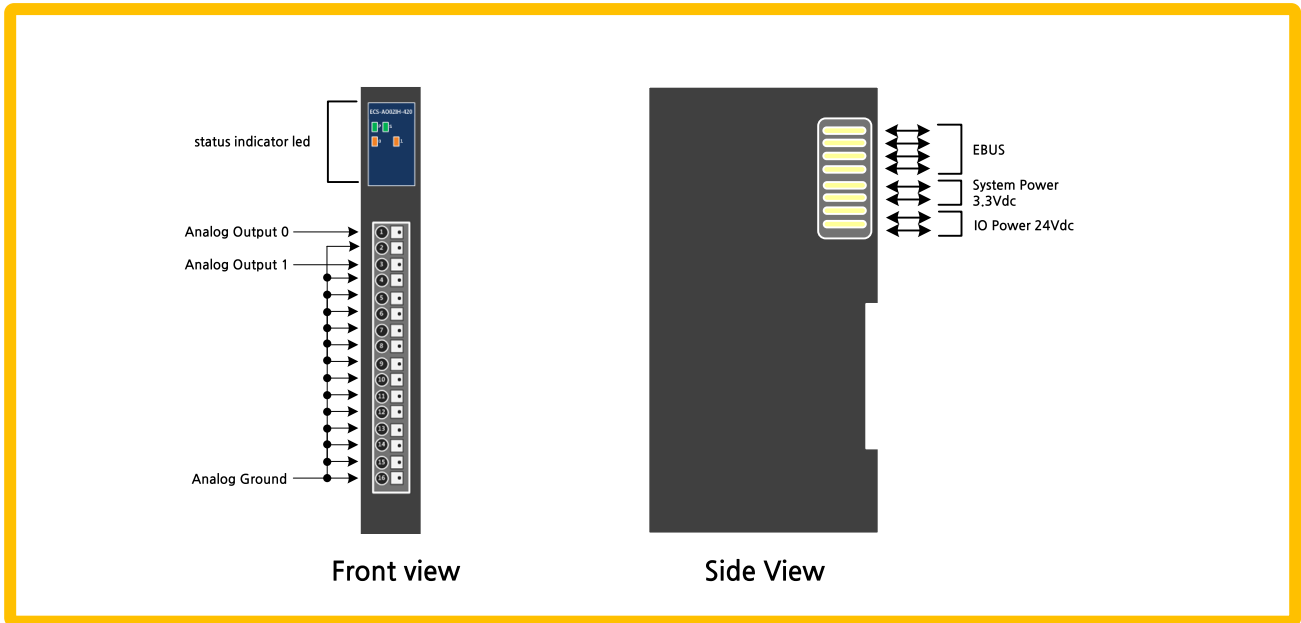
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**개요**

**ECS Series - ECS-AO02IH (Analog Output 2ch)**

ECS-AO02IH는 EtherCAT 기반 제어기인 ECS Series의 2채널 Analog 출력 모듈입니다.

각 채널의 내부 제어신호와 외부 입출력 신호는 포토커플러를 사용하여 절연됩니다.

본 매뉴얼은 ECS-AO02IH의 하드웨어 구성과 기능에 대해 설명하는 하드웨어 매뉴얼입니다.

**제품사양**
**■ Analog Specification**

Contents	Details
Number of Outputs	2 Output
Output type	Single-ended
Resolution	16bit(2's Compliment)
Voltage Output Range	4mA ~ 20mA
Isolation	Non-isolated Between Channels I/O to Logic : Photo-coupler isolation ( 3KV )
Error	Offset Error : ± 0.25% Gain Error : ± 0.25%
Load Resistance	Typ. 25MΩ
Conversion Time	Max. 3ms / All Channels
Wiring contact	LSF-SMT3,5-16P (Weidmuller)

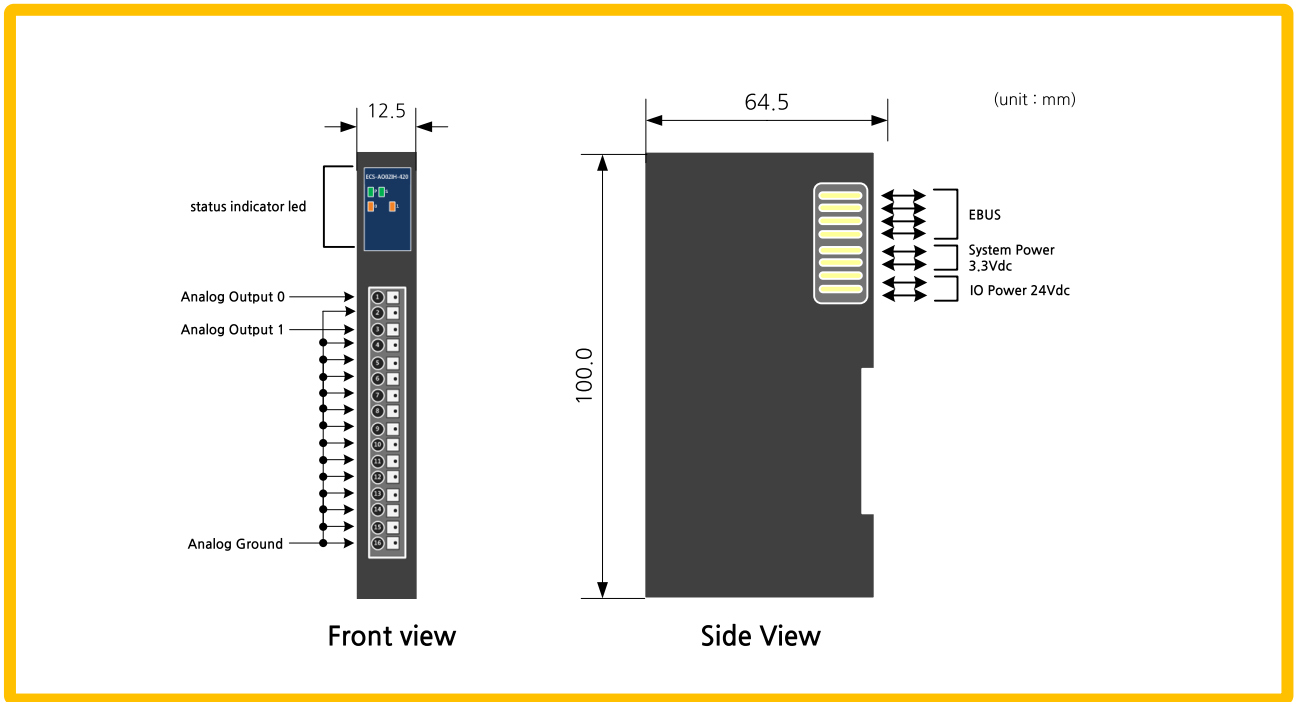
**■ Power Specification**

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°C ~ 50°C
Storage Temperature Range	-20°C ~ 80°C
Operating Humidity Range	5% ~ 90%RH, non-condensing
Storage Humidity Range	5% ~ 90%RH, non-condensing

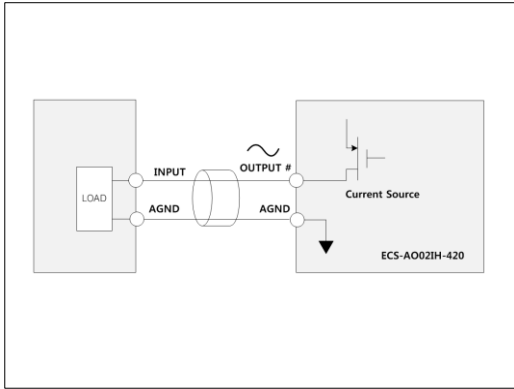
제품사양



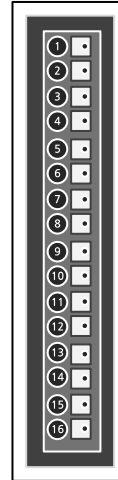
Dimension

Wiring

■ Circuit Diagram

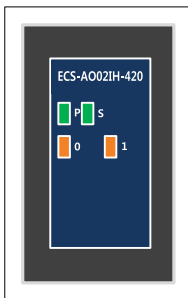


■ PIN MAP



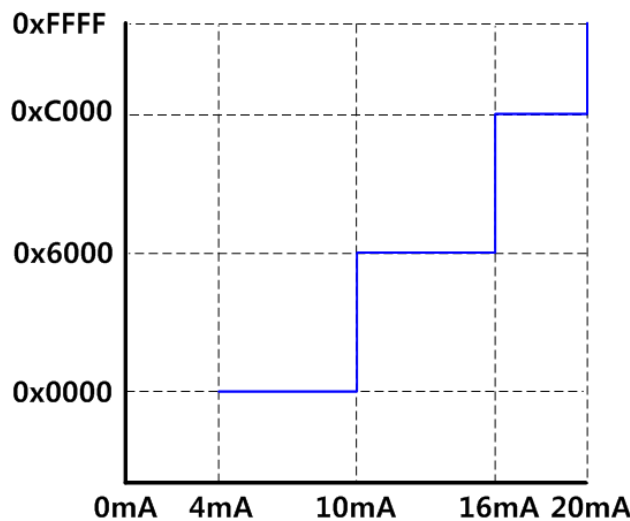
1	OUTPUT0
2	AGND
3	OUTPUT1
4	AGND
5	AGND
6	AGND
7	AGND
8	AGND
9	AGND
10	AGND
11	AGND
12	AGND
13	AGND
14	AGND
15	AGND
16	AGND

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
0-1	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)

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