

ECS Hardware Reference Manual



4CHANNEL ANALOG INPUT MODULE

ECS-AI04R

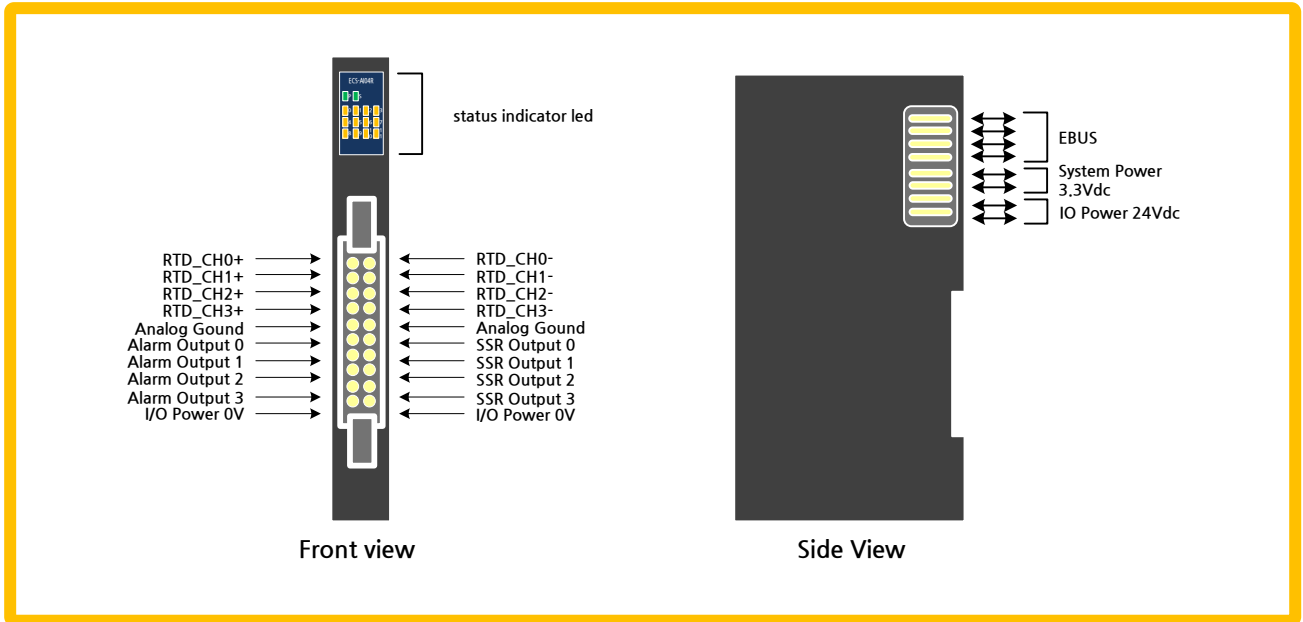
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개요



ECS Series - ECS-AI04R (RTD Input 4ch)

ECS-AI04R는 EtherCAT 기반 제어기인 ECS Series의 4채널 RTD 센서 입력 모듈입니다.

각 채널의 내부 제어신호와 외부 입출력 신호는 포토커플러를 사용하여 절연됩니다.

본 매뉴얼은 ECS-AI04R의 하드웨어 구성과 기능에 대해 설명하는 하드웨어 매뉴얼입니다.

제품사양
■ Analog Specification

ITEM	ECS-AI04R
Number of Inputs	4 input
Input type	Single Ended
Resolution	24bit
RTD Type	PT100 and PT1000 (2-wire)
Isolation	Non-isolated Between Channels I/O to Logic : Photo Coupler isolation(3KV)
Wiring contact	Ribbon Cable connector(HIF3B-20PA-2.54DS)

■ Digital Specification

ITEM	ECS-AI04R
Number of Output	8 output(4 SSR output, 4 Alarm output)
Input type	NPN type, Photo-coupler(Viso=3,000Vrms)

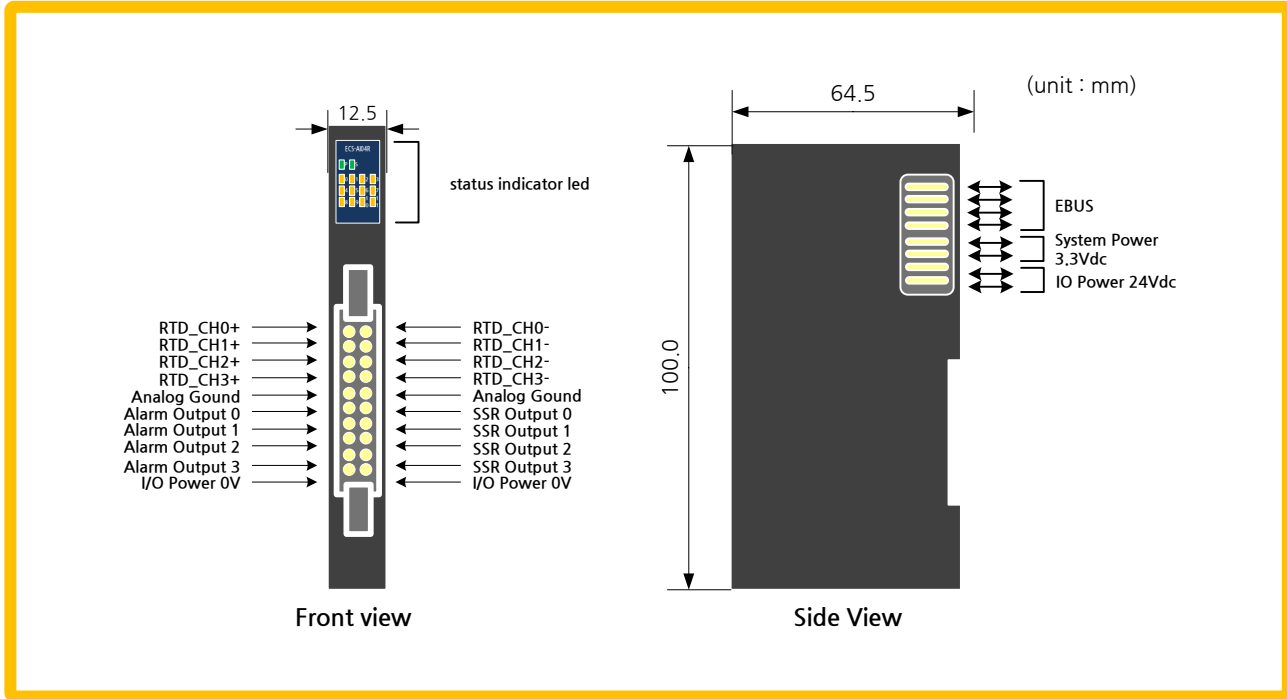
■ Power Specification

ITEM	ECS-AI04R
Power Dissipation(System)	Max. 100mA @ 5.0V DC
Power Dissipation(I/O)	Max. 30mA @ 24.0V DC
Rated Input Voltage	24V DC (-15%/+20%, ripple ratio within 5%) EN 61131-2

■ Environmental Specification

ITEM	ECS-AI04R
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

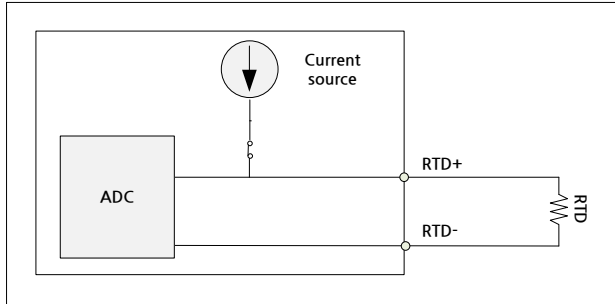


Dimension

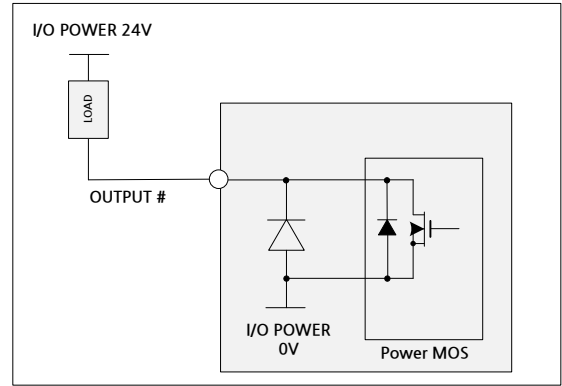
Wiring

■ Circuit Diagram

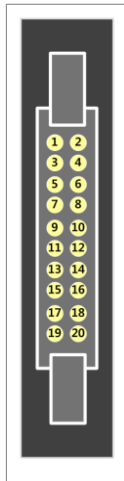
Analog Input



Digital Output



■ PIN MAP



1	RTD_CH0+	2	RTD_CH0-
4	RTD_CH1+	4	RTD_CH1-
5	RTD_CH2+	6	RTD_CH2-
7	RTD_CH3+	8	RTD_CH3-
9	Analog GND	10	Analog GND
11	Alarm Output #0	12	SSR Output #0
13	Alarm Output #1	14	SSR Output #1
15	Alarm Output #2	16	SSR Output #2
17	Alarm Output #3	18	SSR Output #3
19	I/O PWR 0V	20	I/O PWR 0V

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	RTD STATE LED	ON	RTD CHANNEL ON
		OFF	RTD CHANNEL OFF
4-15	OUTPUT STATE LED	ON	OUTPUT ON STATE (LOGIC `1`)
		OFF	OUTPUT OFF STATE (LOGIC `0`)

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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COMIZOA CO.,LTD
<http://www.comizoa.com>
Tel) +82 - 42 - 936 - 6500
Fax) +82 - 42 - 936 - 6507

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