Ezi-IO®

Input/Output Module

- Ethernet Based Analog Input Module
- Simple and Easy Wiring
- Input Mode and Range Configurable
- Moving Average Filtering

Ethernet
AD

CE

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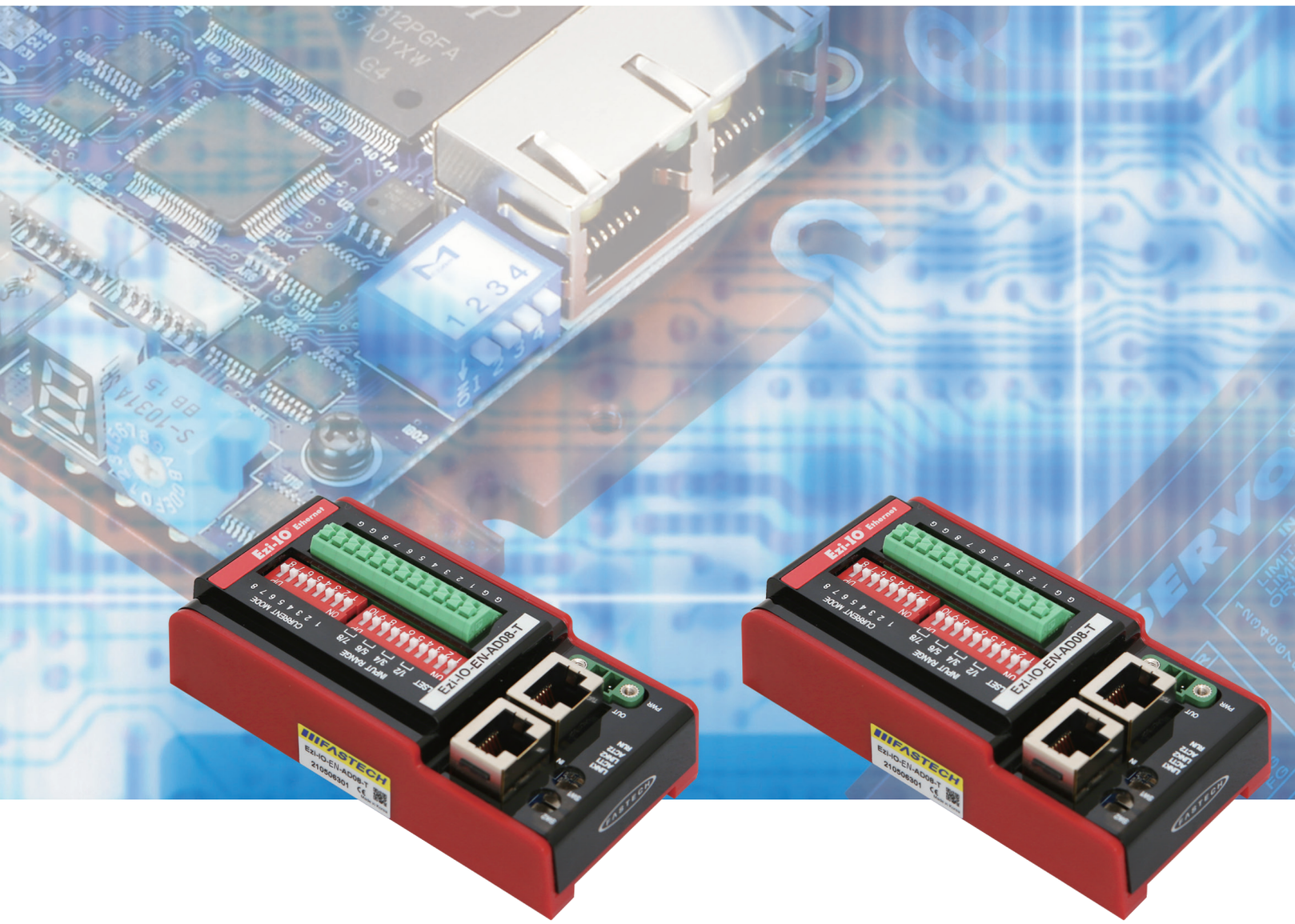

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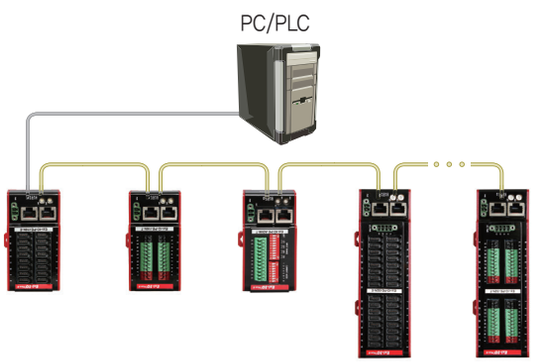
Fast, Accurate, Smooth Motion

Ezi-IO® Ethernet AD

Input/Output Module

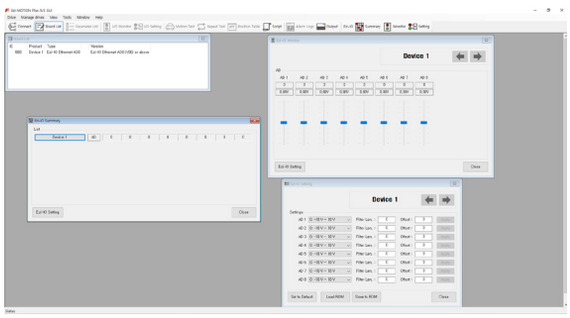
1 Ethernet Based Analog Input Module

Ezi-IO Ethernet AD is an analog input module, controlled via Ethernet. Since Ezi-IO Ethernet AD uses the same communication protocol as FASTECH's other Ethernet products, it can be applied very easily to the customers who have experiences using FASTECH's Ethernet products. Also, FASTECH provides Motion Library(API) for making programs of Ezi-IO Ethernet AD in Windows 7/8/10.



2 GUI and Library(API) Provided

You can set input parameters or monitor A/D conversion values of Ezi-IO Ethernet AD by using GUI (Graphical User Interface)-based support software provided by FASTECH.



3 Simple and Easy Wiring

Ezi-IO Ethernet AD uses a push-in type terminal block. The push-in type terminal block can be easily connected to various devices using ferrule terminals, making the wiring much simpler and easier.

4 Easy Setup with Switches

The Ethernet IP can be set simply with the rotary switch, and the product address can be easily identified.
Also, the voltage or current input mode can be easily selected with the DIP switches, and the input signal range can be easily set in the voltage input mode.

5 Moving Average Filtering

Ezi-IO Ethernet AD provides the moving average filter to remove the noise mixed in the analog signal and suppress the fluctuation of the analog input value.
The range of the moving average filter can be set between 0~200ms.

● Ezi-IO Ethernet AD Part Numbering

Ezi-IO-EN-AD08-T

Product Name	
Module Series	EN : Ethernet
Module Type	AD08 : 8CH / Analog Input
I/O Connection Method	T : Terminal Block

● Ezi-IO Ethernet AD Part Number

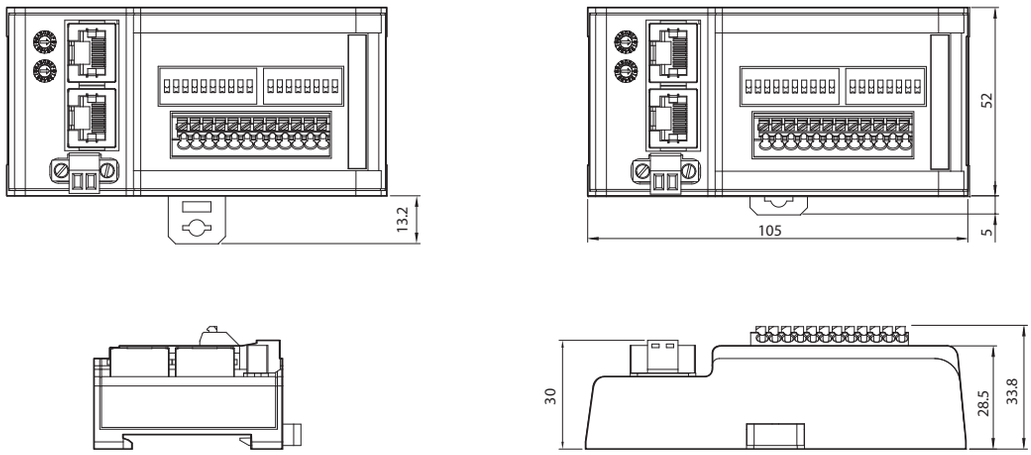
Part Number
Ezi-IO-EN-AD08-T

● Specifications of Module

Model			Ezi-IO-EN-AD08-T	
Input Mode			Voltage Input	Current Input
Input Voltage			DC24V±10%	
Current Consumption			Max. 120mA	
Operating Condition	Ambient Temperature		· In Use: 0~50℃ · In Storage: -20~70℃	
	Humidity		· In Use: 35~85% RH (Non-Condensing) · In Storage: 10~90% RH (Non-Condensing)	
	Vib. Resist.		0.5g	
Function	Number of Input Channels		8CH	
	Max. Permissible Input		±15V	±30mA
	Input Range		· -10~10V · -5~5V · -2.5~2.5V · 0~10V	· 0~20mA
	Input Range Setting Method		· Ethernet Communications (Separate Settings for each channel) · DIP Switch (Separate Settings for each channel)	
	Input Impedance		1MΩ	249Ω
	Max. Resolution		1/8,191 (Full Scale)	
	Accuracy	25℃	±0.3% (Full Scale)	±0.3% (Full Scale)
		0~50℃	±0.4% (Full Scale)	±0.6% (Full Scale)
	Analog Conversion Cycle		200μs/8CH	
	A/D Converted Data		· -10~10V : -4096~4095 · -5~5V : -4096~4095 · -2.5~2.5V : -4096~4095 · 0~10V : 0~8191	· 0~20mA : 0~8191
	Isolation Method		Digtal isolation between analog input and communication connection (Between input channels : non-isolated)	
LED Display			· Power Status (PWR) · Run Status · Ethernet Status (Link, Activity)	
Communication Interface			· Ethernet UDP/TCP Communication · Ethernet standard: 10BASE-T, 100BASE-TX · Full-Duplex	
GUI			User Interface Program within Windows	
Library			Motion Library (API) for windows 7/8/10	

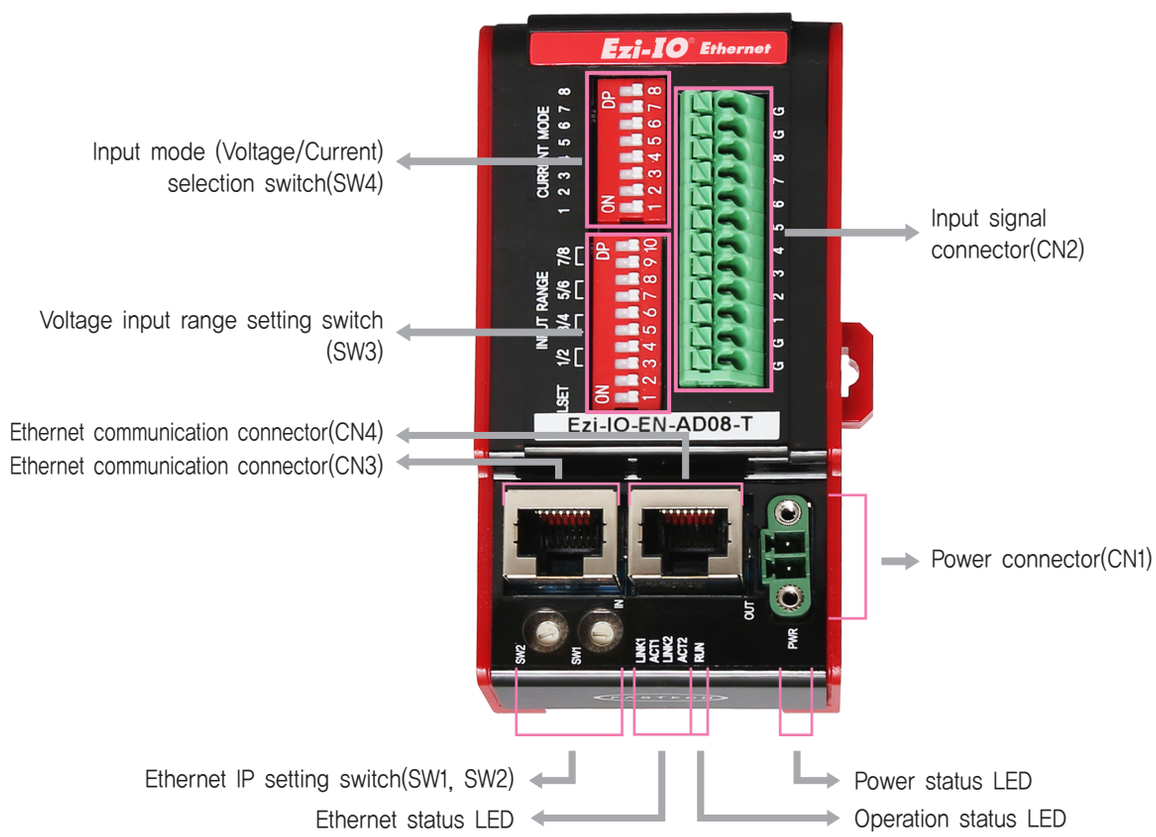
● Dimensions of Module [mm]

◆ Ezi-IO-EN-AD08-T

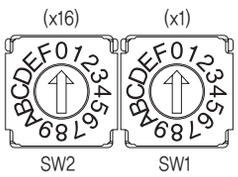


* Install the product on a din rail with a width of 35mm.

● Settings and Operation [Ezi-IO-EN-AD08-T]



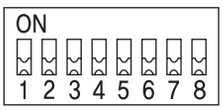
1. Ethernet IP Setting Switch (SW1, SW2)



These switches set the 4th octet of Ethernet IP. The 1st octet,the 2nd octet, and the 3rd octet are set by GUI. If the switches are set to 255(FF), DHCP function is activated, and IP is automatically set, ignoring the set value. (Please refer to the manual for details.)

e.g.,) In case of SW2 : 5 and SW1 : 7
(5×16) + (7×1)= 87
IP is to be set as 192.168.0.87

2. Input Mode (Voltage/Current) Selection Switch (SW4)

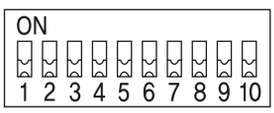


SW4 is a switch that selects voltage/current mode for each channel.
Refer to the following chart for how to use SW4.

Mode \ Switch	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
	SW4.1	SW4.2	SW4.3	SW4.4	SW4.5	SW4.6	SW4.7	SW4.8
Voltage Input	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Current Input	ON	ON	ON	ON	ON	ON	ON	ON

* Select the input mode for each channel with the Input Mode Selection Switch (SW4) before supplying power to the module.

3. Voltage Input Range Setting Switch (SW3)



SW3 is a switch for setting the input range. You can set the range with the combination of the switches.

● Selecting Input Setting Method

You can select the input seting method with the LSET (SW3.1) switch as follows.

Mode \ Switch	LSET	Description
	SW3.1	
DIP Switch	ON	Setting voltage input range with DIP switches (SW3.3~SW3.10)
Ethernet communication	OFF	Setting input range with Ethernet communication.

* If you use any channels in current input mode, the setting method has to be Ethernet Communication (SW3.1=OFF).
* Set SW3.1 according to the desired method before supplying power to the module.
* SW3.2 is not used.

● Voltage Input Setting

When using the DIP Switch for setting (SW3.1 = ON), the voltage input is set as shown in the table below.

Input Range \ Switch	CH1/CH2		CH3/CH4		CH5/CH6		CH7/CH8	
	SW3.3	SW3.4	SW3.5	SW3.6	SW3.7	SW3.8	SW3.9	SW3.10
–10~10V	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
–5~5V	OFF	ON	OFF	ON	OFF	ON	OFF	ON
–2.5~2.5V	ON	OFF	ON	OFF	ON	OFF	ON	OFF
0~10V	ON	ON	ON	ON	ON	ON	ON	ON

4. Status LED

• Power Status LED

Name	Color	Status	Description
PWR	Red	OFF	Power is OFF
		ON	Power is ON

• Operation Status LED

Name	Color	Status	Description
RUN	Green	OFF	Abnormal Operation
		Blinkig	Normal Operation

• Ethernet Status LED

Name	Color	Status	Description
LINK1, LINK2	Green	OFF	Link not Established
		ON	Link Established

• Ethernet Status LED

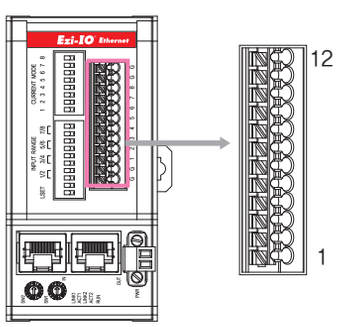
Name	Color	Status	Description
ACT1, ACT2	Yellow	OFF	Stand-by
		Flickering	In Operation

5. Power Connector (CN1)

No.	Function	I/O
1	DC24V	Input
2	GND	Input

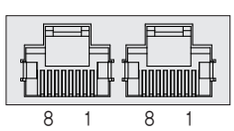
6. Input Signal Connector (CN2)

No.	Name	Function	I/O
1	G	Analog GND	Input
2	G	Analog GND	Input
3	1	Analog In 1	Input
4	2	Analog In 2	Input
5	3	Analog In 3	Input
6	4	Analog In 4	Input
7	5	Analog In 5	Input
8	6	Analog In 6	Input
9	7	Analog In 7	Input
10	8	Analog In 8	Input
11	G	Analog GND	Input
12	G	Analog GND	Input

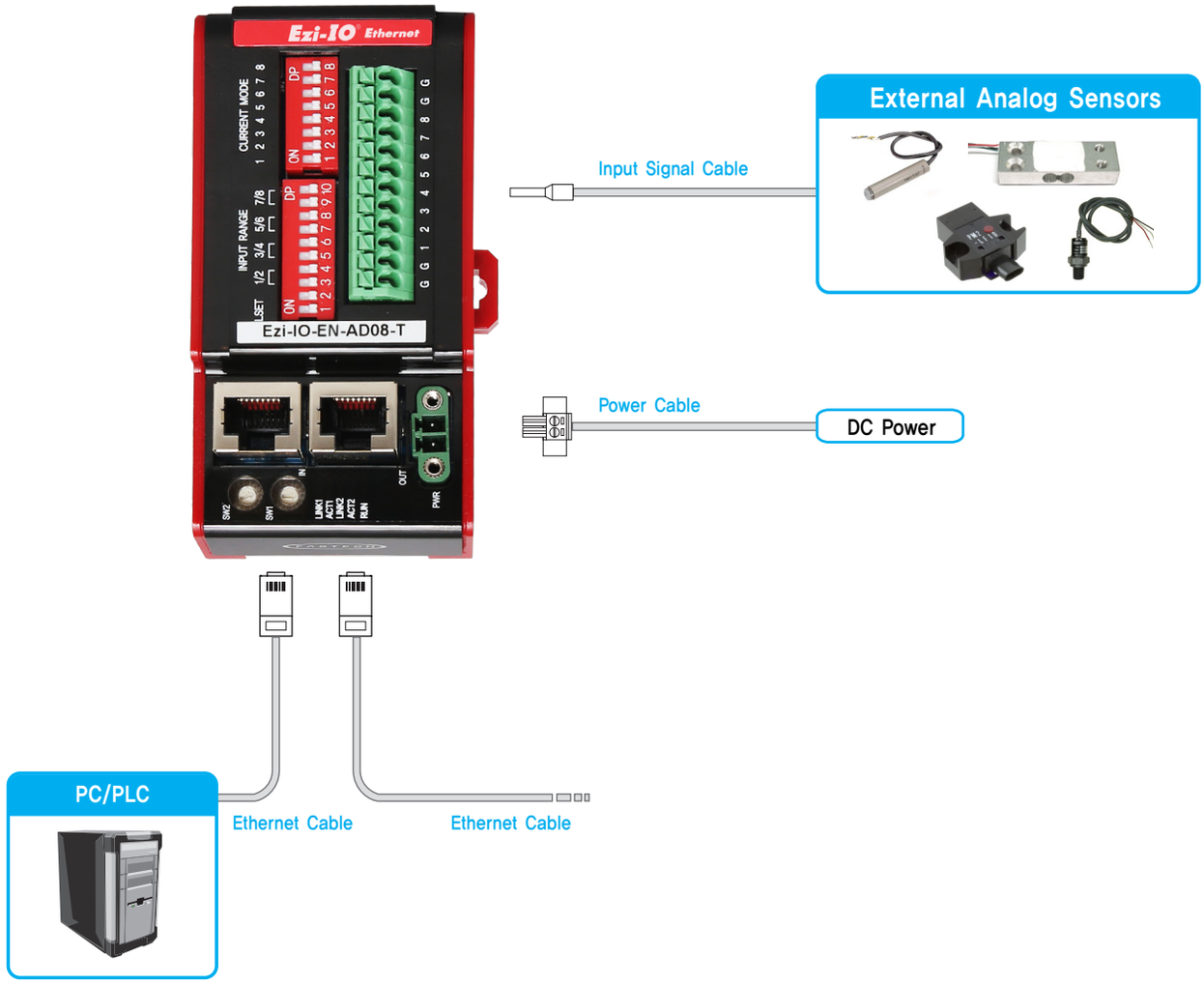


7. Ethernet Communication Connector (CN3, CN4)

No.	Function
1	TD+
2	TD-
3	RD+
4	----
5	----
6	RD-
7	----
8	----
Connector hood	F.GND



System Configuration [Ezi-IO-EN-AD08-T]



1. Accessories

- Connectors

Purpose	Item	Part Number	Manufacturer
Power (CN1)	Terminal Block	MC421-38102	DECA

※ The connectors above are supplied with the product. If you are using other parts, please make sure they meet the specifications.

2. Options

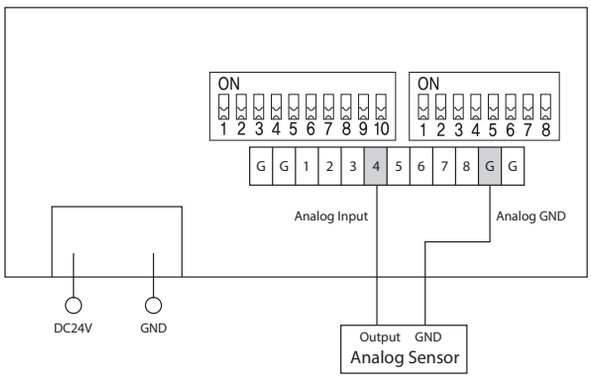
- Ethernet Cable

Purpose	Part Number	Length [m]	Remarks
Ethernet Connection (CN3, CN4)	CGNR-EC-001F	1	· STP(Shielded Twisted Pair) Cable · Category 5e or higher · Maximum Length: 100m · Normal Cable
	CGNR-EC-002F	2	
	CGNR-EC-003F	3	
	CGNR-EC-005F	5	

※ If you need cables with length(in units of 1m) not listed on the table or robot cables, please contact FASTECH for more information.

External Wiring Diagram [Ezi-IO-EN-AD08-T]

1 Ezi-IO-EN-AD08-T



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