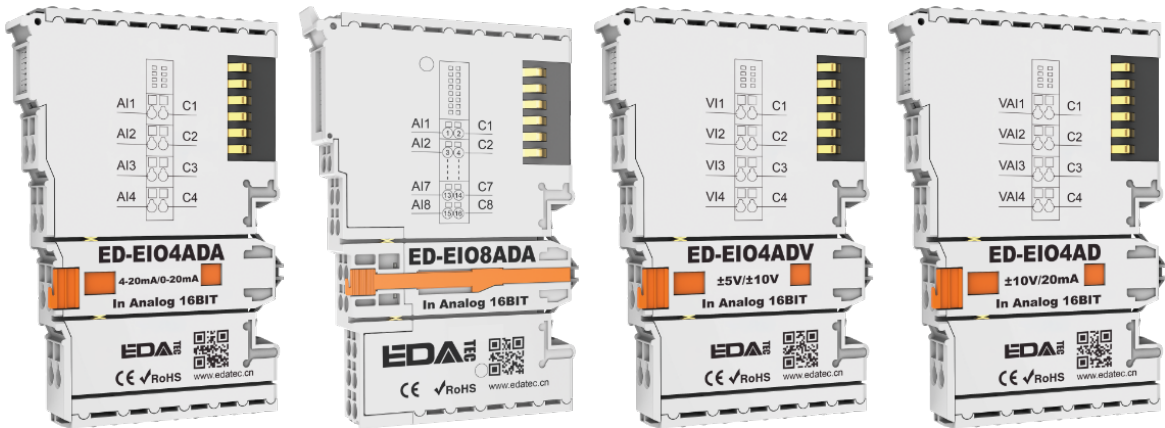




EtherCAT Analog Input Modules

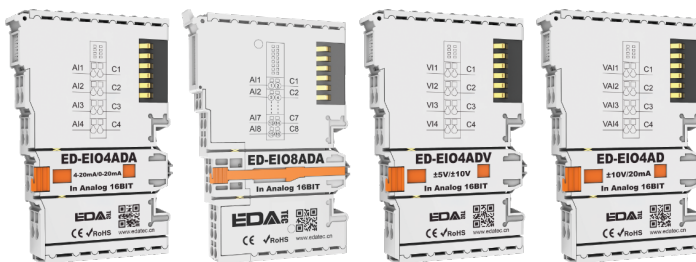
Datasheet

by EDA Technology Co., Ltd

built: 2025-12-22

EtherCAT Analog Input Modules

- 4-channel analog input (current/voltage module) or 8-channel analog input (current module)
- Each channel is equipped with the LED for an operation check
- Signal current supports 4~20mA/0~20mA
- Signal voltage supports -5~5V/0~10V/-10~10V
- 16-bit high-precision analog input
- Plug-in construction, DIN-rail installation
- PT removable terminal block for screwless wiring
- Support cascading up to 32 modules without additional power supply



Specifications

Input (current module)		
Signal Type	Current input	
Number of input signal channels	4	8
Input Current Range	0~20mA/4~20mA	
Current Dissipation	260mA	400mA
Input Filter	Configurable	
Input Impedance	100Ω	
Resolution	16-bit	
Precision	0.1%	
Overvoltage Protection	Support	
Isolation Voltage	AC500V on field and digital side, no isolation between channels	

Input (voltage module)		
Signal Type	Voltage input	
Number of input signal channels	4	

Input (voltage module)	
Input Voltage Range	-5~5V/0~10V/-10~10V
Current Dissipation	260mA
Input Filter	Configurable
Input Impedance	> 500K Ω
Resolution	16-bit
Precision	0.1%
Overvoltage Protection	Support
Isolation Voltage	AC500V on field and digital side, no isolation between channels

Input (voltage/current mixed module)	
Signal Type	Voltage/current input
Number of input signal channels	4
Input Range	Voltage: -5~5V/0~10V/-10~10V Current: 0~20mA/4~20mA
Current Dissipation	260mA
Input Filter	Configurable
Input Impedance	Voltage: > 500K Ω Current: 100 Ω
Resolution	16-bit
Precision	0.1%
Overvoltage Protection	Support
Isolation Voltage	AC500V on field and digital side, no isolation between channels

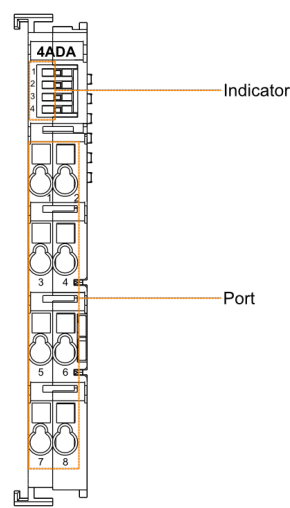
Software	
Fieldbus	EtherCAT
EtherCAT Master Software Platform	CODESYS

Mechanical Characteristics	
Dimensions	100mm x 67.6mm x 14.8 mm
Weight	About 51g
Wiring Specifications	0.2mm ² ~ 1.5mm ²
Wiring Method	Screwless
Installation	DIN-rail installation

Environmental & Regulatory	
Operating Temperature	-10℃ ~ 55℃
Storage Temperature	-20℃ ~ 85℃
Ambient Humidity	5% ~ 95% (non-condensing)
Air Pressure	≥ 795 hPa (altitude ≤ 2000 m), compliant with IEC 61131-2
Overvoltage Categories	I
Certifications	CE and RoHS

Interface Definition

4-channel analog input (current module):

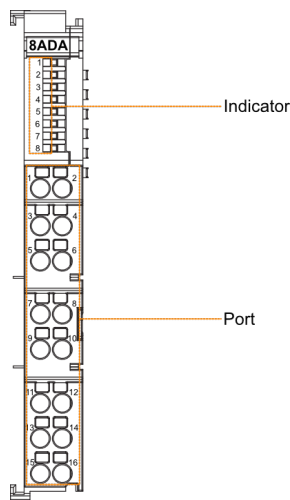


Indicator			
led No.	Input	Color	Description
1~4	AI1/C1~AI4/C4	Green	

Indicator			
			4 indicators correspond to AI1/C1~AI4/C4, which are independent of each other. The states of indicators are on, blink and off. • on: the module is powered on • blink: corresponding channel detects input as 0~20mA/4~20mA • off: the module is not powered on

Port			
Pin No.	Input	Pin No.	Input
1	AI1	2	C1
3	AI2	4	C2
5	AI3	6	C3
7	AI4	8	C4

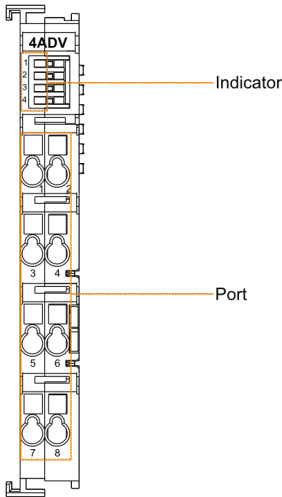
8-channel analog input (current module):



Indicator			
led No.	Input	Color	Description
1~8	AI1/C1~AI8/C8	Green	8 indicators correspond to AI1/C1~AI8/C8, which are independent of each other. The states of indicators are on, blink and off. • on: the module is powered on • blink: corresponding channel detects input as 0~20mA/4~20mA • off: the module is not powered on

Port			
Pin No.	Input	Pin No.	Input
1	AI1	2	C1
3	AI2	4	C2
5	AI3	6	C3
7	AI4	8	C4
9	AI5	10	C5
11	AI6	12	C6
13	AI7	14	C7
15	AI8	16	C8

4-channel analog input (voltage module):

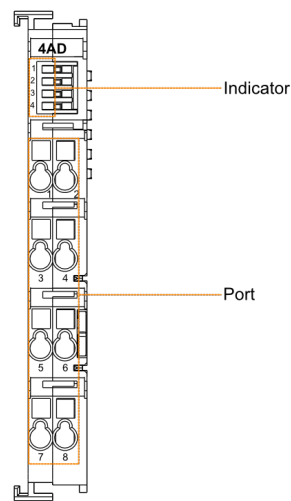


Indicator			
led No.	Input	Color	Description
1~4	VI1/C1~VI4/C4	Green	4 indicators correspond to VI1/C1~VI4/C4, which are independent of each other. The states of indicators are on, blink and off. • on: the module is powered on • blink: corresponding channel detects input as -5~5V/0~10V/-10~10V • off: the module is not powered on

Port			
Pin No.	Input	Pin No.	Input
1	VI1	2	C1

Port			
3	VI2	4	C2
5	VI3	6	C3
7	VI4	8	C4

4-channel analog input (voltage/current mixed module):



Indicator			
led No.	Input	Color	Description
1~4	VAI1/C1~VAI4/C4	Green	4 indicators correspond to VI1/C1~VI4/C4, which are independent of each other. The states of indicators are on, blink and off. • When used as a voltage input channel: ◦ on: the module is powered on ◦ blink: corresponding channel detects input as -5~5V/0~10V/-10~10V ◦ off: the module is not powered on • When used as a current input channel: ◦ on: the module is powered on ◦ blink: corresponding channel detects input as 0~20mA/4~20mA ◦ off: the module is not powered on

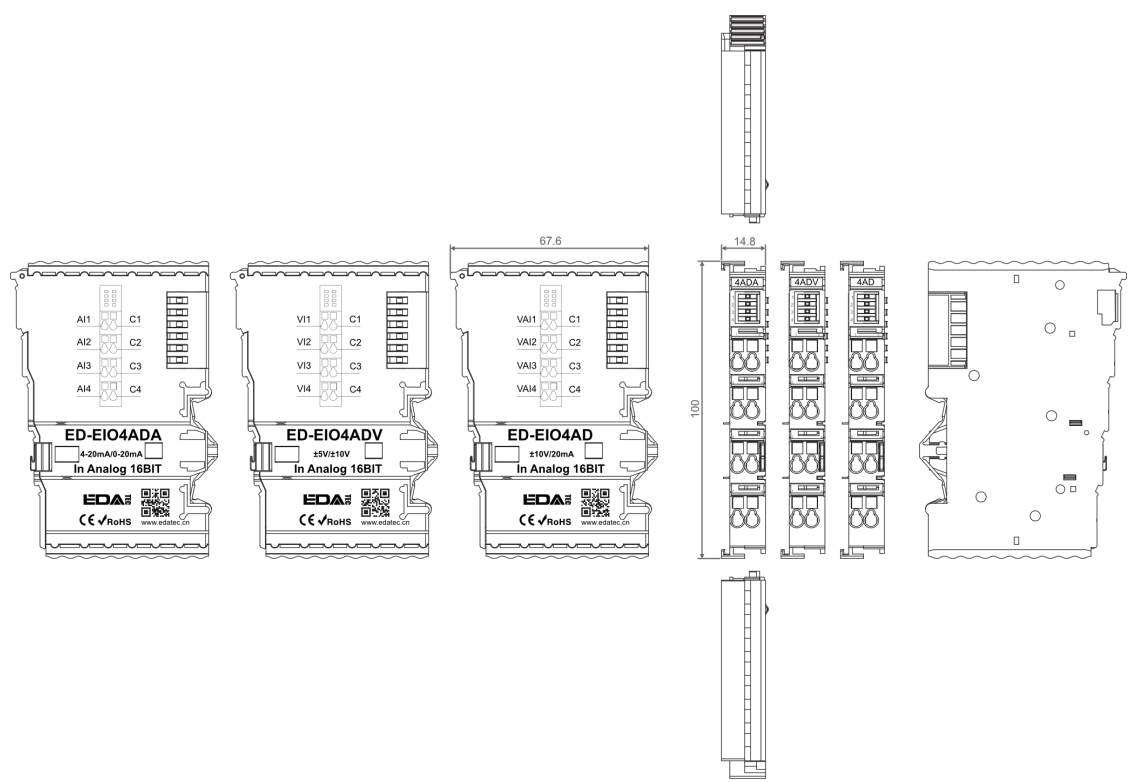
Port			
Pin No.	Input	Pin No.	Input
1	VAI1	2	C1
3	VAI2	4	C2
5	VAI3	6	C3

Port			
7	VAI4	8	C4

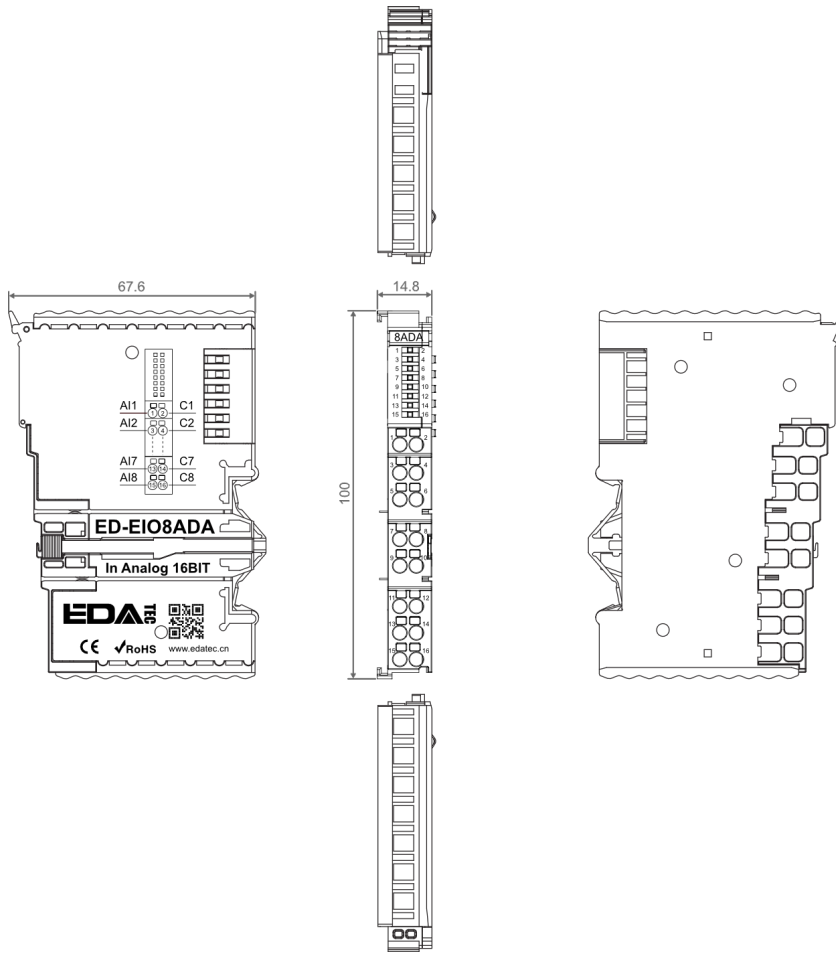
Dimensions

Unit: mm

4-channel analog input modules:



8-channel analog input module:



Ordering Code

Model	Description
ED-EIO4ADA	4-channel analog input module (current), 4-20mA/0-20mA, configurable
ED-EIO8ADA	8-channel analog input module (current), 4-20mA/0-20mA, configurable
ED-EIO4ADV	4-channel analog input module (voltage), -5~5V/0~10V/-10~10V, configurable
ED-EIO4AD	4-channel analog input module (voltage/current mixed), -5~5V/0~10V/-10~10V/4-20mA/0-20mA, configurable

Adapted PLC Unit or EtherCAT Coupler

Model	Description
ED-PLC2010	EtherCAT Master based on CODESYS
ED-EIOBRG-EC	EtherCAT Coupler

Packing List

- 1 x EtherCAT Analog Input Module

Installation

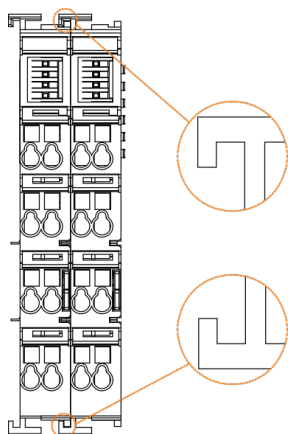
TIP

- DIN-rail is not included in the box, the following is intended as an installation illustration only.
- Before you start installing, please turn off the power to the module.
- If you encounter a situation where the module cannot be installed, please do not force the installation to avoid damaging the module.

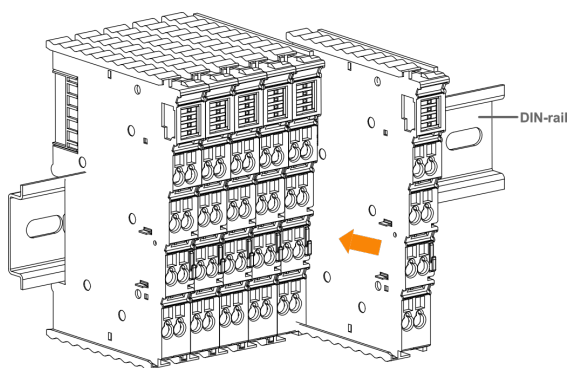
Steps

The following is an example of the installation of an 8-terminal module only.

1. Align the notches in the I/O module.



2. Secure the I/O module to the DIN-rail by pushing the I/O module in the direction of the arrow onto the DIN snap pin.



Dismantling

TIP

- Before you start installing, please turn off the power and disconnect the cable to the module.
- If you encounter a situation where the module cannot be installed, please do not force the installation to avoid damaging the module.

Steps

The following is an example of the dismantling of an 8-terminal module only.

1. Hold the snap pin of the I/O module by hand and then pull it out in the direction of the arrow to disengage the module from the DIN-rail.

