

CONPROSYS Series
Analog Input Module
CPS-AI-1608LI (±10V Input)
CPS-AI-1608ALI (0-20mA Input)



*The photograph is a CPS-AI-1608LI.

* Specifications, color and design of the products are subject to change without notice.

Features

Bus-isolated analog input module providing highly accurate measurement

This product contains bus-isolated analog input (16bit, 8ch) that measures with a high degree of accuracy. It supports differential input and is capable of precise measurement of voltage with potential differences. We are offering the series of two product types to meet the needs of customers.

CPS-AI-1608LI features the function of the analog voltage input (16bit, 8ch).

CPS-AI-1608ALI features the function of the analog current input (16bit, 8ch).

Compact Design

Compact design, 25.2 (W) x 94.7(D) x 124.8(H) mm, features flexibility in installation.

Adaptable to a wide range of temperature between -20 and +60°C

The product is capable of operating in the temperature between -20 and + 60°C. It can be installed in the various environments.

Installation easy with two pieces of terminal support and DIN rail

You can remove a terminal connector without a screwdriver so that it can shorten the time of the replacement. As the product can be not only mounted on DIN rail, but also is removable along the side rails, replacing is simple and easy as well.

Equipped with the LED for an operation check

The product has the LED for an operation check, which helps you visually confirm the communication status of each interface.

No electrolytic capacitor

Without an electrolytic capacitor, which has a limited life, we are creating the product with a longer life.

This product is an extension module with analog input interface and operates along with the CPU module configurable type controller of our CONPROSYS series. It has 8channels of analog input per module.

Specifications

Function specifications < CPS-AI-1608LI >

Item	CPS-AI-1608LI
Input type	Bus-isolated voltage input
Input range	±10V
Maximum input rating	±11V
Input impedance	10MΩ or more
Input channel	Differential input, 8 channels
Resolution	16bit
Non-Linearity error *1	±20LSB (at 25°C)
Channel switching rate *2	10μsec/ch
Conversion rate	10μsec/ch
Isolation	Bus Isolation
Voltage Resistance	500VDC
Connector	2-piece 3.81mmpitch 10-pin terminal
Applicable wire	AWG28 - 16
LED	Status (Green, Red)
Supply Voltage	24VDC ±10%
Current consumption	0.1A (Max.)
Physical dimensions (mm)	25.2 (W)×94.7(D)×124.8(H) (not include projection)
Weight	200g
Installation method	Quick mounting onto 35mm DIN rail

*1 The non-linearity error means an error of approximately 0.18% occurs over the maximum range at -20°C and 60°C ambient temperature.

*2 The fastest sampling clock (sampling interval) that can be set is "10μsec/ch × the number of channels to be obtained".

Function specifications < CPS-AI-1608ALI >

Item	CPS-AI-1608ALI
Input type	Bus isolated current input
Input range	0 - 20mA *3
Maximum input rating	30mA
Input impedance	250Ω (TYP.)
Input channel	Differential input, 8 channels
Resolution	16bit
Non-Linearity error *4	±20LSB (at 25°C)
Channel switching rate *5	20μsec/ch
Conversion rate	20μsec/ch
Isolation	Bus Isolation
Voltage Resistance	500VDC
Connector	2-piece 3.81mmpitch 10-pin terminal
Applicable wire	AWG28 - 16
LED	Status (Green, Red)
Supply Voltage	24VDC ±10%
Current consumption	0.1A (Max.)
Physical dimensions (mm)	25.2 (W)×94.7(D)×124.8(H) (not include projection)
Weight	200g
Installation method	Quick mounting onto 35mm DIN rail

*3 With the analog ground as a benchmark, the voltage of terminal (+) each should stay between -0.5V and +7V, and the voltage of terminal (-) each should stay between -5.5V and +5.0V. (See connecting examples)

*4 The non-linearity error means an error of approximately 0.19% occurs over the maximum range at -20°C and 60°C ambient temperature or if analog terminal (-) is not an analog ground voltage.

*5 The fastest sampling clock (sampling interval) that can be set is "20μsec/ch × the number of channels to be obtained".

CAUTION

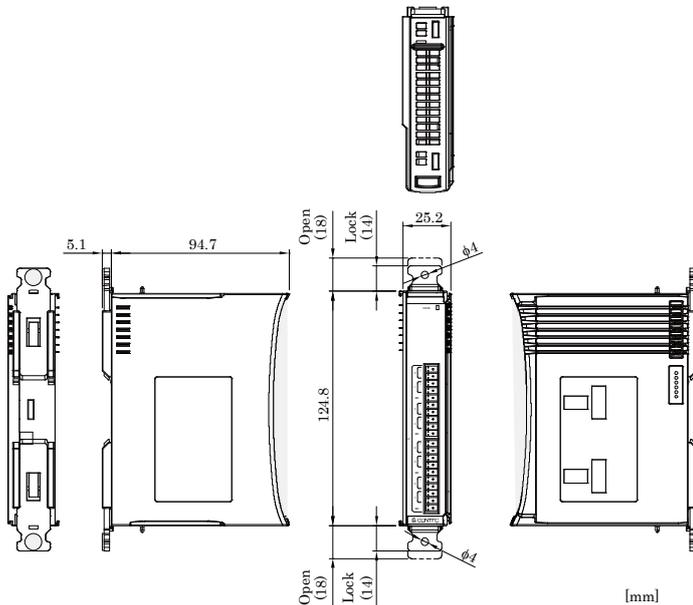
The maximum number of stacking devices operating along with the stack type controller is 16 and the total current consumption of the devices should be less than 3.3A.

Installation Environment Requirements

Item	CPS-AI-1608LI	CPS-AI-1608ALI
Operating ambient temperature	-20 - +60°C	
Operating ambient humidity	10 - 90%RH (No condensation)	
Non-operating ambient temperature	-20 - +60	
Non-operating ambient humidity	10 - 90%RH (No condensation)	
Floating dust particles	Not to be excessive	
Corrosive gases	None	
Line-noise resistance	Line noise	Signal Line /±1kV (IEC61000-4-4 Level 3, EN61000-4-4 Level 3)
	Static electricity	Touch /±4kV (IEC61000-4-2 Level 2, EN61000-4-2 Level 2)
	resistance	Air /±8kV (IEC61000-4-2 Level 3, EN61000-4-2 Level 3)
Vibration resistance	Sweep resistance	10 - 57Hz *6/ semi-amplitude vibration 0.15mm, 57 - 150Hz/2.0G 40 minutes each in X, Y, and Z directions (JIS C60068-2-6-compliant, IEC60068-2-6-compliant)
		15G half-sine shock for 11ms in X, Y, and Z directions (JIS C60068-2-27-compliant, IEC60068-2-27-compliant)
Impact resistance	VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)	
Standard	VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)	

*6 With the optional DIN rail fitting power supply: 10-55Hz (See the manual of optional power product for details)

Physical Dimensions



List of Option

Stack Type Controller

- CPS-MC341-DS1-111: Stack Type CPU module
- CPS-MCS341G-DS1-130: Stack Type CPU module + 3G WAN
- CPS-MCS341Q-DS1-131: Stack Type CPU module + 920MHz LAN
- CPS-ECS341-1-011: Ether CAT Slave Module

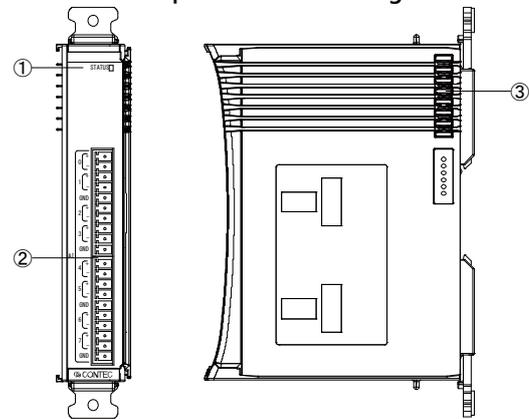
DIN rail mounting power supply

- CPS-PWD-90AW24-01: DIN rail mounting power supply 90[W]
(Input: 100 - 240VAC, output: 24VDC 3.8 A)
- CPS-PWD-30AW24-01: DIN rail mounting power supply 30[W]
Input: 100 - 240VAC, output: 24VDC 1.3 A)

* Information about the option products, see the Contec's website.

Component Name

Component name of the product is shown in Figure.



1. LED : Indicates the status of the product.
2. Analog input : Use the 10-pin connector, included in this package.
3. Stack Bus : Used for the stacking device power supply and communication.

Packing List

- Product (one of the followings) ...1
[CPS-AI-1608LI, CPS-AI-1608ALI]
- Product Guide ... 1
- Warranty Certificate ...1
- Serial number Label ...1
- 10-pin Connector ...2