

# DATENBLATT

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CPS-AO-1604LI

CPS-AO-1604VLI

## **HABEN SIE FRAGEN ODER WÜNSCHEN SIE EIN INDIVIDUELLES ANGEBOT?**

Unser Team berät Sie gerne persönlich.

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## **ADRESSE**

Am Sonnenlicht 5

D-82239 Alling bei München



CONPROSYS Series  
Analog Output Module  
**CPS-AO-1604LI (0-20mA Output)**  
**CPS-AO-1604VLI (±10V Output)**



\*The photograph is a CPS-AI-1608LI.  
\* Specifications, color and design of the products are subject to change without notice.

**Features**

**Bus-isolated analog output module providing highly accurate measurement**

This product contains bus-isolated analog output (16bit, 4ch) that measures with a high degree of accuracy. Two product types are offered for voltage output or current output to suit the connecting targets.

CPS-AO-1604LI features the function of the analog current output (16bit, 4ch).

CPS-AO-1604VLI features the function of the analog voltage output (16bit, 4ch).

**Compact design**

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

**Adaptable to a temperature range 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 install and 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 LED for an operation check**

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

**No electrolytic capacitor battery**

No electrolytic capacitor is used. The Contec is creating the product with a longer life.

This product is a configurable module to provide analog output interface and operates along with the configurable type CPU module controller of our CONPROSYS series. It has 4channels of high precision analog output per module and provides high accuracy.

\* The contents in this document are subject to change without notice.  
\* Visit the CONTEC website to check the latest details in the document.  
\* The information in the data sheets is as of October, 2018.

**Packing List**

- Product (one of the followings) ...1  
[CPS-AO-1604LI, CPS-AO-1604VLI]
- Product Guide ... 1
- Warranty Certificate ...1
- Serial Number Label ...1
- 10-pin Connector ...1

**Specifications**

**Function Specifications < CPS-AI-1608LI >**

| Item                     | CPS-AO-1604LI                                      |
|--------------------------|--|
| Output type              | Bus-isolated current output                        |
| Output range             | 0-20mA   |
| Output channel           | 4 channels   |
| Resolution               | 16 bit   |
| Conversion accuracy *1   | ±1LSB(at 25°C) *2                                  |
| Settling time *3         | 20µsec   |
| Data buffer              | 4k-Word  |
| 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      | 0.2A (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 When ripple 5mVrms power supply is applied to the load side. (KX-100L by TAKASAGO)

\*3 Settling time is from when DAC data is set until the change of the analog value stops.

Function Specifications < CPS- AO-1604VLI >

| Item                     | CPS-AO-1604VLI                                     |
|--------------------------|--|
| Output type              | Bus-isolated voltage output                        |
| Output range             | ±10V   |
| Output channel           | 4 channels   |
| Resolution               | 16 bit   |
| Conversion accuracy *4   | ±15LSB(at 25°C)                                    |
| Settling time *5         | 10µsec   |
| Data buffer              | 4k-Word  |
| 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      | 0.2A (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                  |

\*4 The non-linearity error means an error of approximately 0.18% occurs over the maximum range at -20°C and 60°C ambient temperature.

\*5 Settling time is from when DAC data is set until the change of the analog value stops.

Caution

You can set the modules as you desire to the configurable controller up to 16 modules.  
The total current consumption of the modules should be less than 3.3A.

Installation Environment Requirements

| Item                              | CPS-AO-1604LI   | CPS-AO-1604VLI  |
|-----------------------------------|---|---|
| Operating ambient temperature     | -20 - +60°C   |   |
| Operating ambient humidity        | 10 - 90%RH (No condensation)  |   |
| Non-operating ambient temperature | -20 - +60°C   |   |
| 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 resistance   | Touch /±4kV(IEC61000-4-2 Level 2, EN61000-4-2 Level 2)<br>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<br>40minutes each in X, Y, and Z directions (JIS C60068-2-6-compliant, IEC60068-2-6-compliant) |
|                                   | Shock resistance  | 15G half-sine shock for 11ms in X, Y, and Z directions<br>(JIS C 60068-2-27 -compliant, IEC 60068-2-27 -compliant)  |
| Standard                          | VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), UL |   |

\*6 When you use an optional power product: 10-55Hz (See the manual of optional power product for details)

List of Option

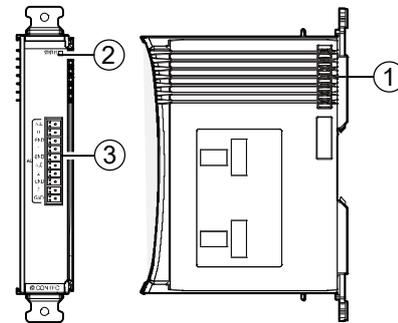
Configurable Type Controller

- CPS-MCS341-DS1-111 Configurable Type CPU module
- CPS-MCS341-DS1-131 Configurable Type CPU module + OPC UA server + MTConnect
- CPS-MCS341G-DS1-130 Configurable Type CPU module +3GWAN
- CPS-MCS341Q-DS1-131 Configurable 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)

Component Name



| No. | Name          | Function  |
|-----|---------------|---|
| 1   | Stack Bus     | Used for power supply and communication with the configurable type module.                  |
| 2   | LED Indicator | This indicates status of the product  |
| 3   | Analog Output | This is a connector for analog output. (Use the 10-pin connector, included in the package). |

Physical Dimensions

